



spatial **offline**

SpatialOFFLINE Installation and Administration Guide

2011.R1 Version 4.1.2

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About this Guide

This guide provides step-by-step processes for installing, upgrading, and configuring spatialOFFLINE, including security and license management.

Audience

This guide is intended for system administrators and configuration managers.

Version

SpatialOFFLINE version 2011.R1 Version 4.1.1

Prerequisites

- SpatialNET database Version 5.7
- Pre-configured spatialWEB database Version 4.1
- System Administrator with XML knowledge
- New 4.x compatible license key is required from SPATIALInfo; the old 3.* keys previously issued do not work with the new version

Related Documentation

- SpatialOFFLINE release notes
- *SpatialWEB Installation and Administration Guide*
- *XAML Export Tool Configuration Guide*

Spatial Database Region Size

The maximum recommended size for a region in the spatial database is 300–500 nodes.

System Requirements

Server

The spatialOFFLINE Sync Server uses Windows server technology. The following operating systems are recommended:

- Windows Server 2008 32-bit or 64-bit
- Windows Server 2003 32-bit (Enterprise or Advanced Server is preferred in the 32-bit architecture)

The following other Windows components must be installed:

- Microsoft .NET Framework 4
- SQL Server CE v.3.5 SP2

Note: SP1 included in installer, also available from Microsoft at:

<http://www.microsoft.com/downloads/en/details.aspx?FamilyID=e497988a-c93a-404c-b161-3a0b323dce24>

It is highly recommended that spatialOFFLINE Sync Server be stored on the same server as the Oracle database for best performance. Sync Server can also be hosted on the same server as spatialWEB.

The size of the database significantly affects the storage space required to store the offline data, but not the rest of the system specs required for the Sync Server.

20 spatialOFFLINE 60GB Data	20 spatialOFFLINE 120GB Data
2 x dual-core Xeon 2.5GHz 32GB RAM 2 x 200GB SCSI 15k HDD	4 x dual-core Xeon 2.5GHz 32GB RAM 2 x 200GB SCSI 15k HDD

Client

- The minimum RAM requirements for the client machine are as follows:
 - **XP:** 1 gigabyte
 - **Vista and Windows 7:** 2 gigabytes
- For best performance results, it is recommended that you have 4 gigabytes of RAM.
- SQL Server CE v.3.5 SP2

Note: SP1 included in installer, also available from Microsoft at:

<http://www.microsoft.com/downloads/en/details.aspx?FamilyID=e497988a-c93a-404c-b161-3a0b323dce24>

Support

<http://support.spatialinfo.com>

Feedback

SPATIALInfo welcomes comments and feedback. Send email to feedback@spatialinfo.com.

Chapter 1 Sync Server Installation

SpatialOFFLINE provides access to database maps offline. Maps can be downloaded from the following:

- Sync Server
- CD/thumb drive/file share transfer

1.1 Sync Server Requirements

Prior to installation, ensure the following software is installed on the server where Sync Server will be installed:

- Oracle 11g
- Internet Information Services (IIS) 7 with .NET framework
- SQL Server CE

1.2 Installation

1. Configure a virtual directory in IIS 7 with the name **Maps**. This virtual directory must correspond to the physical location of the Maps folder (see step 8.d). For more information on creating and configuring a virtual directory, see “Creating and Configuring Virtual Directories in IIS 7” at MSDN.com (<http://msdn.microsoft.com/en-us/library/bb763173.aspx>).
2. Open the SPATIALinfo Sync Server .msi file. The Setup Wizard opens.

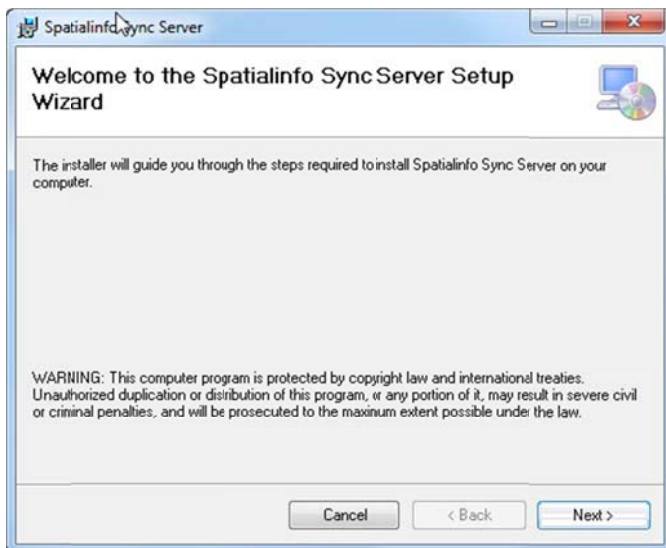


Figure 1: SPATIALinfo Sync Server Setup Wizard

3. Click **Next**.

4. Complete the following:
 - a. Enter the path and folder where the Sync Server will be installed. Note that all configuration files will be located in this folder.
 - b. Select the permissions options for everyone or only the user of the local client machine. Select **Everyone**.

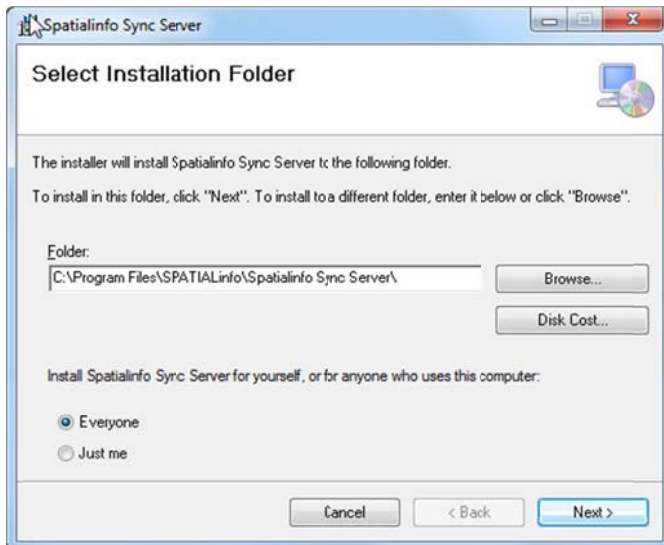


Figure 2: Installation Folder

5. Click **Next**.
6. Enter the database connection string in the following format:
UserID=USERID Password=PASSWORD Data Source=SERVER/ora11g
Note: Replace USERID, PASSWORD, and SERVER (i.e., TNS Names entry) with your values.

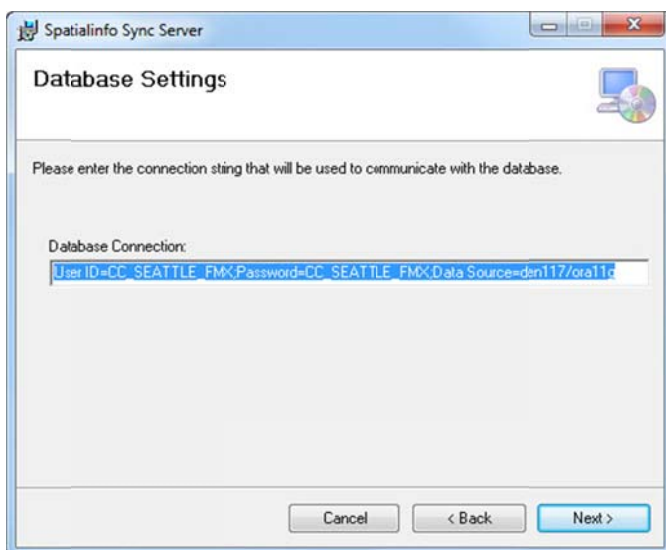


Figure 3: Database Settings

7. Click **Next**.

8. Enter the following:
 - a. **IP Address:** Address of the machine the Sync Server runs on
 - b. **Sync Port Number:** Listeners that the Sync Server opens
Note: SpatialOFFLINE Sync Server only uses http traffic and only with a custom application for physical file transfers.
 - c. **Export Control Port Number:** Port used by the Server Manager User Interface
 - d. **Maps Location:** By default, the Maps Location is set to the C: drive with the folder name Maps: **c:\Maps**. You can change the drive as needed.
Important Note: Whatever drive and folder name you use must match the physical path identified for the virtual directory you created in IIS.

Figure 4: Communications and Map Data

9. Click **Next**. Sync Server is ready to be installed.
10. Click **Next**. The installation begins, and the wizard indicates when it has completed successfully.
11. Click **Close**.

1.3 Upgrading the SpatialOFFLINE Sync Server

Note: When removing a copy of spatialOFFLINE from a computer, the log files and user and groups in Server Manager are not affected.

1. Remove the existing copy of spatialOFFLINE before installing the upgrade:
 - a. Navigate to **Start > Control Panel > Programs > Uninstall a Program**.
 - b. Select spatialOFFLINE from the programs list.
 - c. The Uninstall dialog box opens. Click **Remove the Application from this computer**.
2. After spatialOFFLINE is removed, follow the steps in section 5.1 “Client Installation and Setup” to install the upgrade.

Chapter 2 Configuration Tool

The Sync Server installation includes the Configuration Tool (**ConfigurationTool.exe**), located in the install folder, **C:\Program Files\SPATIALInfo\Spatialinfo Sync Server**. The tool is documented in detail in the *SpatialWEB Installation and Administration Guide*, but a couple of areas of interest to spatialOFFLINE are shown below.

2.1 Settings > Geometry

On the Geometry tab, the default settings likely to be of interest are in the Geometry Performance Tuning section. For example, see the **Hide text smaller than** setting. The default value is **1**. If you change this to a smaller value, such as **.25**, text larger than that value will be rendered, but be aware of the impact to performance.

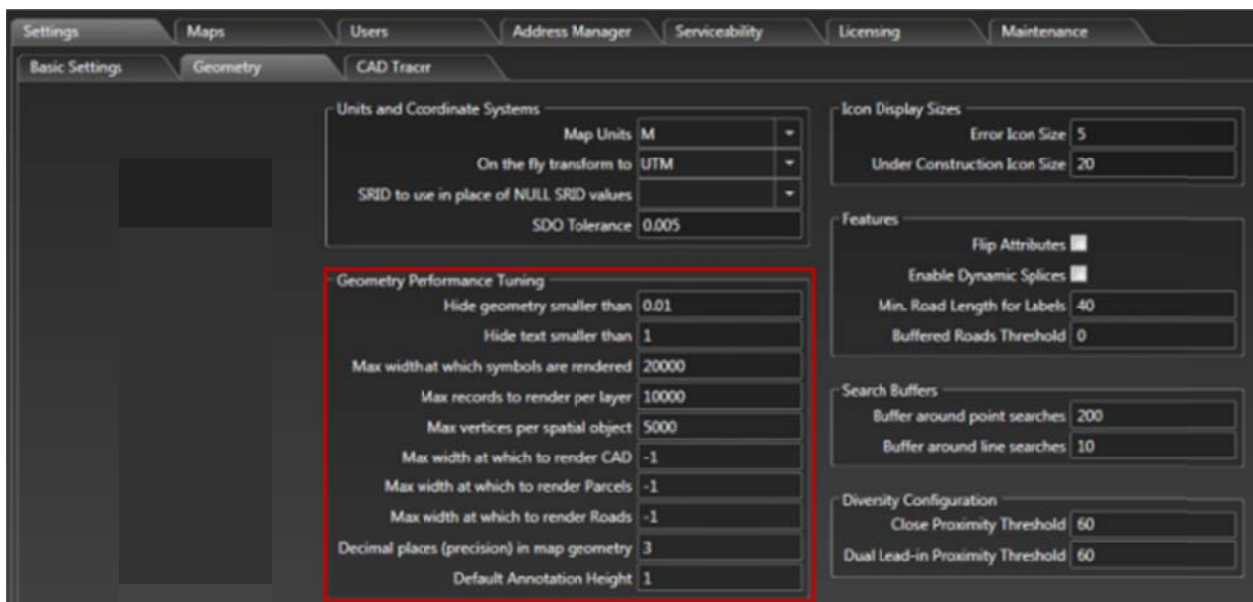


Figure 5: Configuration Tool, Settings > Geometry tab

2.2 Maps > Layers

The default **Width** value for all layers is **0.25**. To change the setting, enter the value in the **Width** column for that layer, e.g., boundary/airport **0.5**.

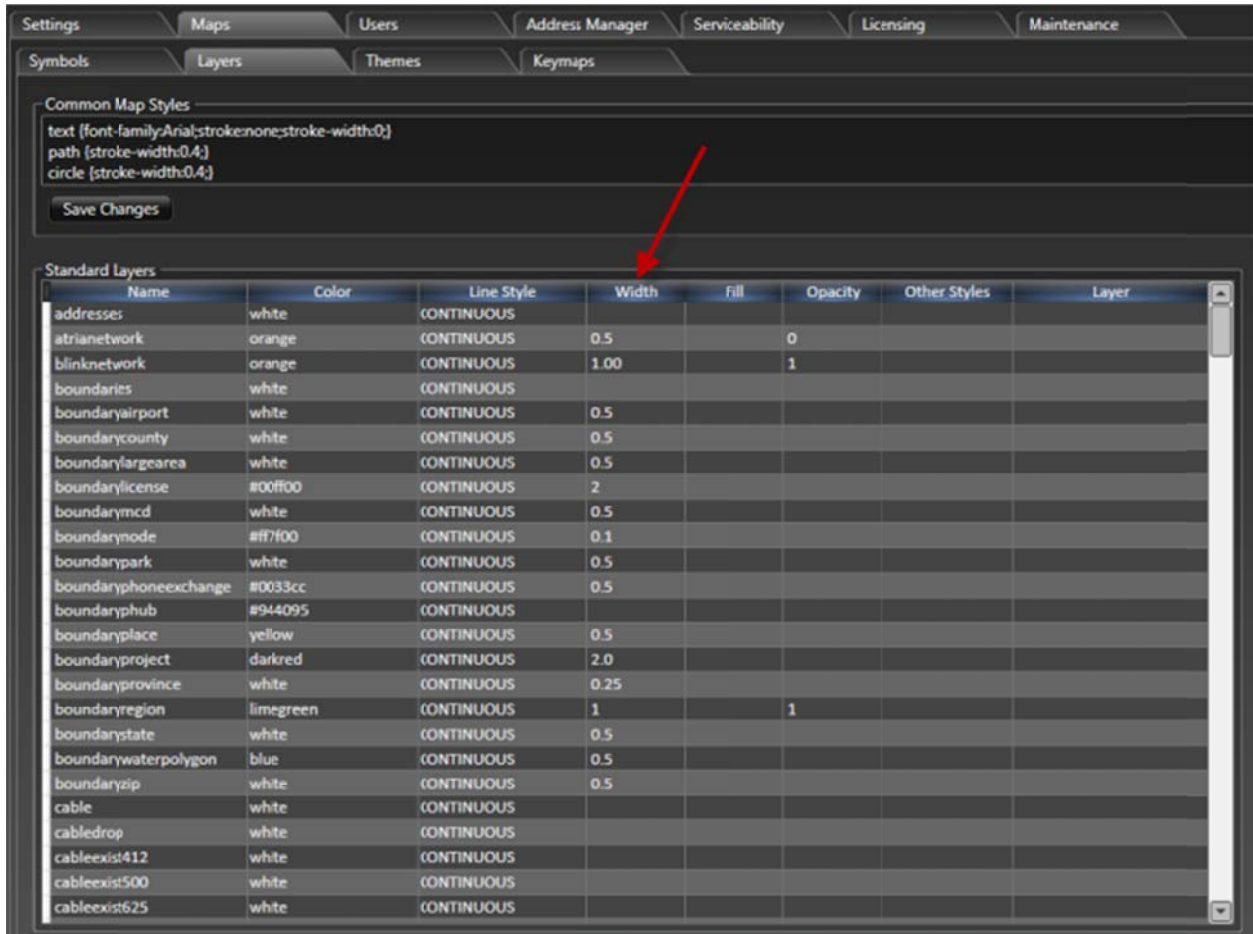


Figure 6: Configuration Tool, Maps > Layers tab

Chapter 3 Server Manager

Administrators can create users and groups and perform license management tasks for spatialOFFLINE using Server Manager. Groups define what the users assigned to that group can view in spatialOFFLINE. Users must belong to a group, and can only belong to one group at a time.

Important Note: A new 4.0 compatible license key is required from SPATIALInfo. The old 3.* keys previously issued do not work with the new version.

WARNING: If region boundaries are redrawn in the SpatialNET database, you **MUST** do the following:

1. Modify any existing groups in Server Manager to select the new regions. See section 3.2 “Managing Groups”.
2. Re-run the export. Refer to *XAML Export Tool Configuration Guide*.
3. Instruct users to update available regions in the Client. See section 5.4 “Selecting/Changing Available Region(s)”.

3.1 Logging in

1. To open Server Manager, navigate to **\Program Files\SPATIALInfo\Spatialinfo Sync Server** and double-click the **Spatialinfo.Offline.SyncServer.ServerManager.exe** file.

The Login window opens.

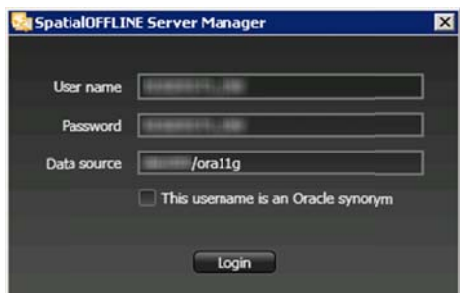


Figure 7: Server Manager Login

2. Enter the **User name**, **Password**, and **Data source**, as identified in the **Offline Export Server.exe.config** file. For example:

```
<add key="ConnectionString" value="User ID=USERID;Password=
PASSWORD;Data Source=den202/ora11g" />
```

Where *USERID* and *PASSWORD* are your values

Important Note: The first time you log in to Server Manager, you must register the server license before you can set up users, groups, or client licenses. If you have not yet registered the server license, the message box shown in Figure 8 opens.



Figure 8: Server Manager Login Error Message

3. If you see this message, click **OK**. Server Manager opens to the Licensing tab.

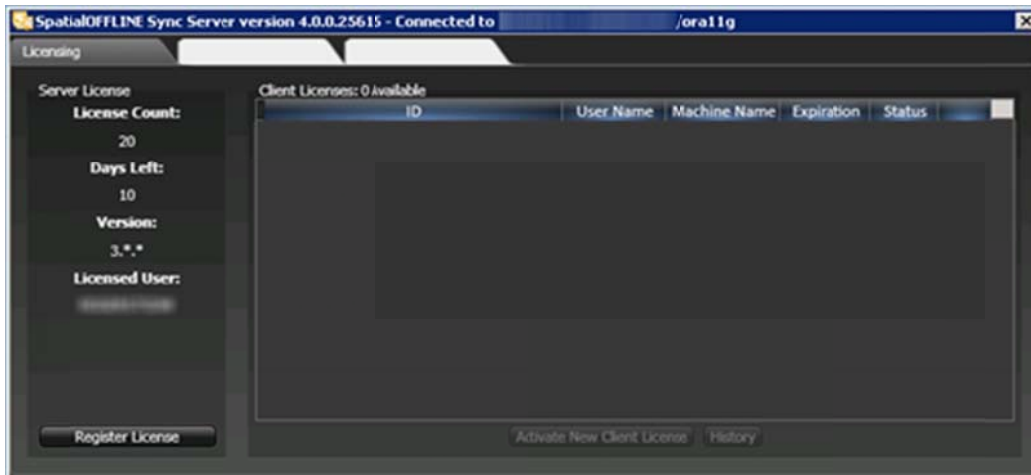


Figure 9: Licensing Tab

Refer to section 3.4.1 “Registering the Server License”.

3.2 Managing Groups

SpatialOFFLINE uses groups to define what information the map contains for a specified set of users. Each user must belong to a group, and can belong to only one group.

During the initial export, a folder is created under the Maps folder for each defined group containing that group’s set of data. Each time you run an export, the data in the folders is updated according to the kind of export you select (full export or update). If a group has been added or deleted since the last export, folders are added or deleted accordingly when the new export runs.

In creating groups, note that you cannot mix regular and anonymous users in a single group. If you want to define the same group attributes for both regular and anonymous users, you must create one group for the regular users and another group for the anonymous users. In the group for regular users you must select the **Require Login** check box, and in the group for anonymous users do not select the check box.

WARNING: If region boundaries are redrawn in the SpatialNET database, you **MUST** follow the steps in the WARNING box at the beginning of this chapter.

1. Select the Groups tab.

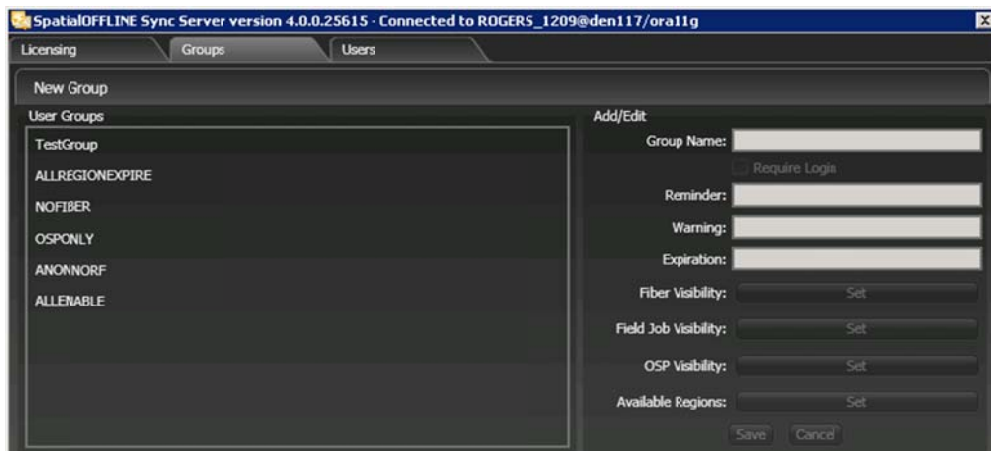


Figure 10: Server Manager Groups Tab

2. To create a new Group:
 - a. Click **New Group**.
 - b. Enter the **Group Name**.
 - c. The **Require Login** check box:
 - i. Select for a group containing regular users.
 - ii. Do not select for a group containing anonymous users.
 - d. For the following fields, enter the number of days since the last synchronization when the user will receive a notification.
 - **Reminder** – Example: 10
 - **Warning** – Example: 15
 - **Expiration** – Example: 20

In the above examples, the user will receive a reminder 10 days after the last synchronization, a warning 15 days after the last synchronization, and the license expires after 20 days.
 - e. To set the **Fiber Visibility**:
 - i. Click **Set**.
 - ii. Select the appropriate check boxes:
 - **Cables**
 - **Fiber Details**
 - **Fiber Traces**
 - **Fiber Splicing**

Only the selected items will be included in the exports for this group.
 - iii. Click **OK**.
 - f. To set **Field Job Visibility**:
 - i. Click **Set**.
 - ii. Select the appropriate check boxes:
 - **View Field Jobs**
 - **Create Field Jobs**

If **View Field Jobs** is selected, users in the group can see markup data from all users when they synchronize with the server and download updated map data. If **Create Field Jobs** is selected, the user can create field jobs. Otherwise, they can only view map data.

- iii. Click **OK**.
 - g. To set **OSP Visibility**:
 - i. Select the appropriate check boxes:
 - **Addresses**
 - **RF Plant**
 - **Support Structures**
 - **Boundaries**
 - **Landbase**
 - **Annotations**
 - **CAD**

Only the selected items will be included in the exports for this group.
 - ii. Click **OK**.
 - h. To set **Available Regions**:
 - i. Select the appropriate check box(es).
 - ii. Click **OK**.

Only the selected regions will be included in the exports for this group.
 - i. Click **Save**. The new group appears in the **User Groups** list.
3. To modify an existing group:
- a. Select the group from the **User Groups** list.

The group's information appears in the **Add/Edit** section and the button text next to **Fiber Visibility**, **Field Job Visibility**, **OSP Visibility**, and **Available Regions** changes to **Change**.

Note: Field Job Visibility consists of two selections, one that enables the user to create and submit field jobs and another that enables the user to view the markups from all field jobs when they synchronize with the server.
 - b. Change any of the attributes of the group.

If you change any attributes, including adding or deleting regions from the group, you must run a new export. When the export is complete, instruct the users to navigate to System Settings, click **Update Available Regions List from Sync Server**, and re-subscribe as needed. See section 5.4 "Selecting/Changing Available Region".
 - c. Click **Save**.

3.3 Managing Users

From the Users tab, you can create new users, change user passwords, and associate users with an existing group (see previous section, 3.2 "Managing Groups"). Note that a user must be associated with a group, and can only be associated with one group at a time. However, when you create a new user or associate an existing user with a new group, the changes are not all reflected until you run another export and the user synchronizes with the server. If you associate a user with a different existing group, the user must synchronize with the server to retrieve the map data associated with that group.

Note: Anonymous users do not have a user name defined in Server Manager; they only need an activated client license.

1. Select the Users tab.

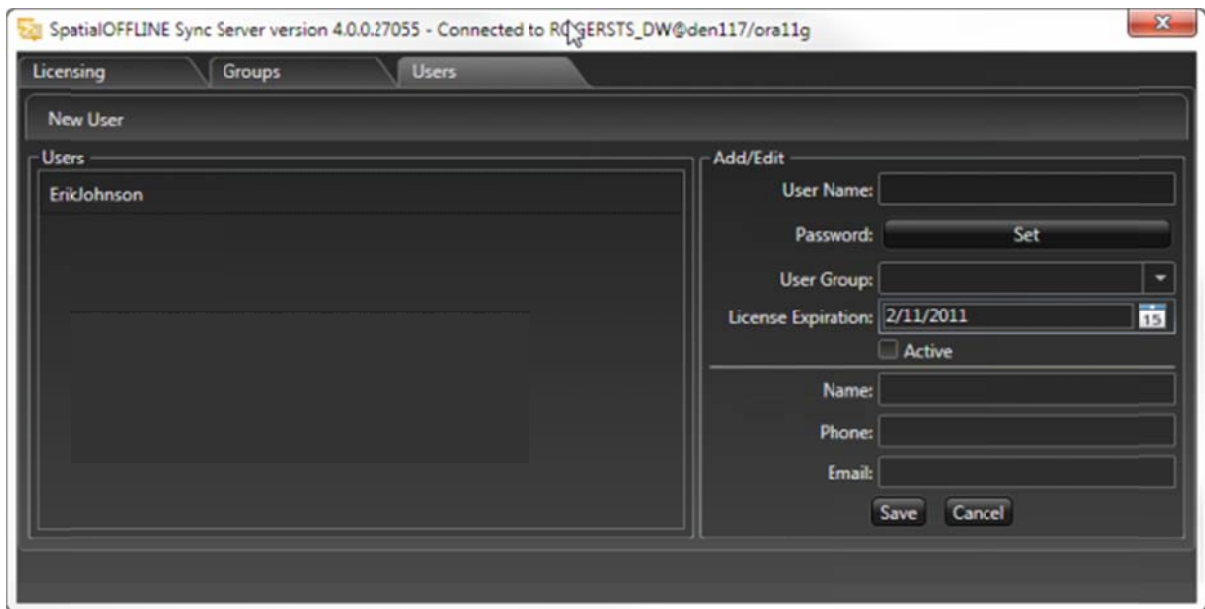


Figure 11: Server Manager Users Tab

2. To create a new regular user:

- a. Click **New User**.
- b. Enter the **User Name**.
- c. To create a password:
 - i. Click **Set**.
 - ii. Enter the new password in both fields, and click **OK**.
- d. To set the **User Group**, click the down-arrow and select a group.
Note: Note that the list only presents groups defined for regular users (i.e., that require login).
- e. If there are licenses available, the **License Expiration** field appears. Select the expiration date.
- f. Select the **Active** check box. This is required for the user to have privileges to log in to the server.
Note: The fields at the bottom (Name, Phone, and Email) are optional.
- g. Click **Save**. The new user appears in the **Users** list. If there were licenses available, and you selected the expiration date, the license is created and appears in the list on the Licensing tab (see Figure 12: Licensing Tab).

3. To edit an existing regular user:

- a. Select the user from the **Users** list. The user's information appears in the **Add/Edit** section and the button text next to **Password** changes to **Change**.
- b. To change the password:
 - i. Click **Change**.
 - ii. Enter the new password in both fields, and click **OK**.
- c. To change the **User Group**, click the down-arrow and select a group.
Note: Only the groups for regular users are presented in the list.

- d. To deactivate the user, clear the **Active** check box.
- e. Click **Save**.

3.4 Managing Licenses

SPATIALinfo generates a license file that is incorporated into the database when the administrator registers the server license. The server license contains information about the software version number, schema name and password, and number of users in the client license pool.

When the expiration date is reached for the server license, everything stops working at both the server and client level.

There are two types of client licenses: **regular users** and **anonymous users**.

- Client licenses for **regular users** are tied to a user, a group, and a specific machine, and have an expiration date. The administrator can grant, revoke, disable, or change the expiration date for the client pool licenses.

When a client license for a regular user expires, the administrator has 30 days to extend the expiration date, or the server automatically revokes the license and returns it to the pool.

At every login, the server checks the user name, group, and client license information of the user. The activation code and machine name are collected the first time the users logs in, and are verified each time thereafter.

- An **anonymous user** never synchronizes with the server. Anonymous client licenses are tied to a group and a specific machine. These licenses cannot be manually revoked.

When an anonymous user license reaches its expiration date, Server Manager automatically revokes it, and increases the number of client licenses in the pool by one. After the expiration date, the anonymous user is no longer able to log in on the client.

If the number of pool licenses is reduced, Server Manager revokes the licenses closest to their expiration date until the number of client pool licenses reaches the new lower number.

All license activity is stored as permanent history. License information in the database is encrypted.

3.4.1 Registering the Server License

Important Note: A new 4.0 compatible license key is required from SPATIALinfo. The old 3.* keys previously issued do not work with the new version.

1. Copy the license file generated by SPATIALinfo onto the server where Sync Server and Export Server reside.
2. Select the Licensing tab in Server Manager.
3. To register the server license:
 - a. Click **Register License**.
 - b. When prompted, browse to where the license file is located.
 - c. Select the license (.lic) file and click **Open**.

The server uploads the license information into the database and the new license information appears on the tab.

Notice that the number of client licenses is displayed at left, and the number of available client licenses is displayed above the list. When you first register the license, these will be the same number.

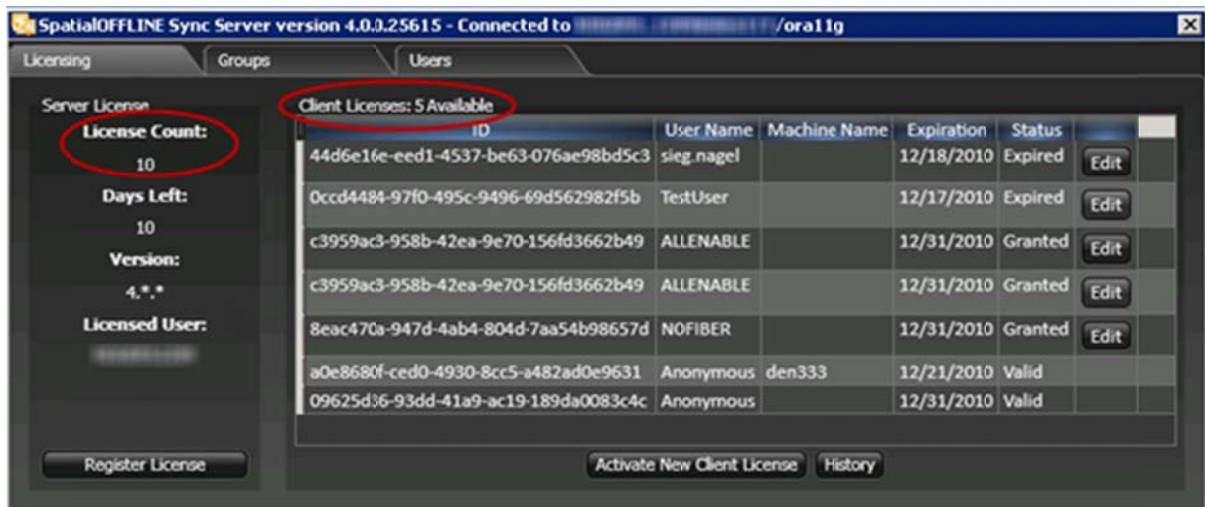


Figure 12: Licensing Tab

Once you have activated a client license (either manually or by creating a user), it appears in the list. The number of available licenses equals the license count minus by the number of non-expired licenses (status equal to **Valid** or **Granted**). See section 3.4.2 “Activating a Client License”.

3.4.2 Activating a Client License

A regular user is tied to a group and a specific machine. If licenses were available at the time the user was created, Sync Server creates the user license, and it appears in the list on the Licensing tab. If no licenses were available, you must manually activate a license when one becomes available. See section 3.3 “Managing Users”.

An anonymous user is tied to a group and a specific machine. The administrator must manually activate each client license for anonymous users.

To manually activate a new client license:

1. Click **Activate New Client License**.
The Activate Client dialog box opens.

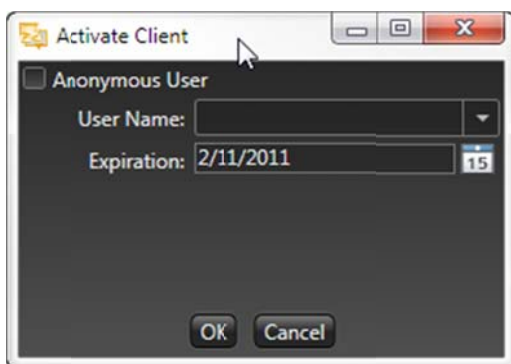


Figure 13: Activate Client

2. For a regular user:
 - a. Select the **User Name**.
Note: The user is assigned to a group at setup.
 - b. Select the **Expiration Date**.

- c. Click **OK**.
3. For an anonymous user:
 - a. Select the **Anonymous User** check box.

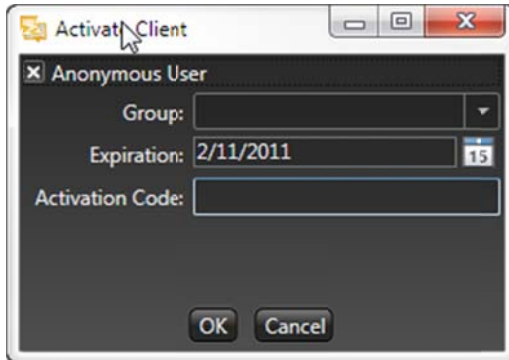


Figure 14: Activate Client – Anonymous User

- b. Select the **Group**.

Note: The list only presents groups created for anonymous users (i.e., do not require login).
- c. Select the **Expiration** date.
- d. Enter the **Activation Code** received from the user the first time they tried to log in.
- e. Click **OK**.
- f. Email the license file to the user.

3.4.3 Editing a Client License

To change the expiration date, disable, or revoke a license for a regular user:

1. Click the **Edit** button to the right of the user in the list of licenses (see Figure 12).

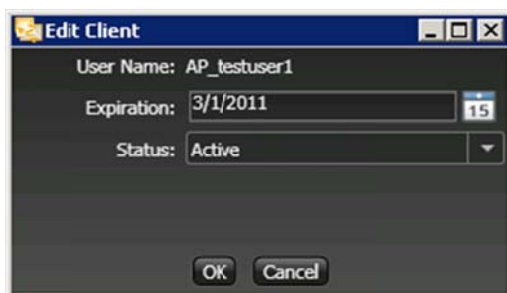


Figure 15: Edit Client License

2. Change the **Expiration** or **Status** (values are **Active**, **Disabled**, or **Revoked**) and click **OK**.

Note: Disabling a license shuts down the user and deletes the license from the pool. Revoking a license shuts down the user while keeping the license in the pool.

3.4.4 Setting Up Client Users

Run the export using the XAML Exporter Tool. The export process creates one folder for each group in the Maps folder on the server. Each group folder contains the map and root-level files (such as dictionaries, templates, and the policy file) for that group. See “Appendix A: Export Tool ReadMe File” and Chapter 4 “Configuring Export Types” for additional information about exports.

Install the client on each machine. Refer to Chapter 5 “Client Installation and Setup”.

Every time a user logs in, Sync Server generates the activation code based on their client machine, as shown in Figure 16. Sync Server adds this activation code, along with the machine name, to the client license the first time the user logs in, and uses the activation code thereafter to validate the user. The client license is also updated when a user logs in the first time after the expiration date on the license has been extended.

WARNING: Client licenses are not transferable; they apply only to the user and machine for whom they were generated. If you move or tamper with the license file, the client will no longer be able to log in to the server.

3.4.5 Logging Into the Client for the First Time

1. Double-click the spatialOFFLINE icon on your desktop. The login window opens.

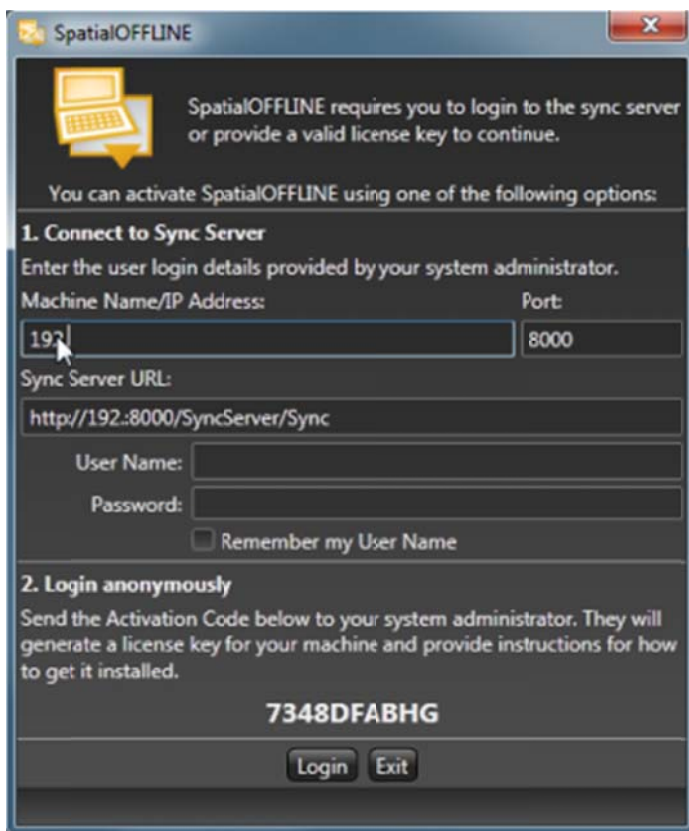


Figure 16: Login Window

2. For **regular users** (who have a user name defined in Server Manager and will connect to the Sync Server):
 - a. Values for the following fields are provided by the administrator. Complete these fields and click **Login**.
 - **Machine Name/IP Address**
 - **Port** (default to 8000)
 - **Sync Server URL** – This value is completed as you type the **Machine Name**
 - **User Name**

- **Password**

- Select the **Remember my User Name** check box.

The first time the user logs in, Sync Server gathers the activation code and machine name, adds the information to the license file, and sends the updated license file to the c:\Maps folder on the client along with the root-level files as defined by the group the user is assigned to.

Note: You must first subscribe to at least one region, which should have been completed during client installation. Refer to section 5.4 “Selecting/Changing Available Region(s)”.

- When the interface opens, select **Offline > Synchronize**. Sync Server copies the map files into your c:\Maps folder.
- For **anonymous users** (who do not have a user name defined in Server Manager and will not be connecting with the server):
 - Copy and paste the Activation Code into an email to the administrator requesting an anonymous license.
 - Close the login window.
 - The administrator generates the license and emails it back, along with the appropriate root-level and map files as defined by the group. (See section 3.4.2 “Activating a Client License” step 3.)
 - Copy these files into the c:\Maps folder on the client. At that point, when the user attempts to log in, Sync Server finds the license and allows them to log in.

3.4.6 Viewing Client License History

To view client license history:

- Click **History**.
 - Select a **User** from the list in the Search panel.
 - Select an action type to retrieve from the list. To select multiple actions, press and hold **Ctrl-Shift** and select the actions. The default, if you do not select anything, is to retrieve all records for the selected user.
 - Enter a number for **Max Results** (e.g., 50) and click **Get**. License activity records meeting the criteria are displayed.

ID	User ID	Machine ID	Action Type	Date/Time	Details
124100600	124100458	FB764:EDLD	Sync	11/20/2010 8:15:57 AM	Sync task requested: Type: GetNewAndUpdatedFilesTask Parent: No parent No Params
124100599	124100458	FB764:EDLD	Sync	11/20/2010 8:15:04 AM	Sync task requested: Sync file reader task: GetRootFilesTask. Reader: RootBoundaryReader Reader
124100597	124100458	FB764:EDLD	LoginInit	11/20/2010 8:15:04 AM	User was authenticated successfully.
124100598	124100458	FB764:EDLD	LicenseReceived	11/20/2010 8:15:04 AM	License was sent to user.
124100583	124100458	FB764:EDLD	Sync	11/17/2010 9:11:27 AM	Sync task requested: Type: GetNewAndUpdatedFilesTask Parent: No parent No Params
124100582	124100458	FB764:EDLD	Sync	11/17/2010 9:10:59 AM	Sync task requested: Sync file reader task: GetRootFilesTask. Reader: RootBoundaryReader Reader
124100581	124100458	FB764:EDLD	Sync	11/17/2010 9:10:58 AM	Sync task requested: Sync file reader task: GetRegionNamesTask. Reader: RootBoundaryReader Reader
124100579	124100458	FB764:EDLD	LicenseReceived	11/17/2010 9:10:32 AM	License was sent to user.
124100580	124100458	FB764:EDLD	Sync	11/17/2010 9:10:32 AM	Sync task requested: Sync file reader task: GetRootFilesTask. Reader: RootBoundaryReader Reader
124100578	124100458	FB764:EDLD	LoginInit	11/17/2010 9:10:31 AM	User was authenticated successfully.
124100542	124100458	FB764:EDLD	Sync	11/14/2010 3:02:56 PM	Sync task requested: Type: GetNewAndUpdatedFilesTask Parent: No parent No Params
124100540	124100458	FB764:EDLD	Sync	11/14/2010 3:02:44 PM	Sync task requested: Sync file reader task: GetRegionNamesTask. Reader: RootBoundaryReader Reader
124100541	124100458	FB764:EDLD	Sync	11/14/2010 3:02:44 PM	Sync task requested: Sync file reader task: GetRootFilesTask. Reader: RootBoundaryReader Reader
124100538	124100458	FB764:EDLD	LicenseReceived	11/14/2010 3:00:37 PM	License was sent to user.
124100539	124100458	FB764:EDLD	Sync	11/14/2010 3:00:37 PM	Sync task requested: Sync file reader task: GetRootFilesTask. Reader: RootBoundaryReader Reader
124100537	124100458	FB764:EDLD	LoginInit	11/14/2010 3:00:37 PM	User was authenticated successfully.
124100502	124100458	FB764:EDLD	Sync	11/13/2010 5:14:45 PM	Sync task requested: Sync file reader task: GetRootFilesTask. Reader: RootBoundaryReader Reader
124100501	124100458	FB764:EDLD	Sync	11/13/2010 5:14:45 PM	Sync task requested: Sync file reader task: GetRegionNamesTask. Reader: RootBoundaryReader Reader
124100500	124100458	FB764:EDLD	Sync	11/13/2010 5:10:05 PM	Sync task requested: Sync file reader task: GetRootFilesTask. Reader: RootBoundaryReader Reader
124100499	124100458	FB764:EDLD	Sync	11/13/2010 5:10:04 PM	Sync task requested: Sync file reader task: GetRegionNamesTask. Reader: RootBoundaryReader Reader
124100498	124100458	FB764:EDLD	Sync	11/13/2010 5:06:21 PM	Sync task requested: Sync file reader task: GetRootFilesTask. Reader: RootBoundaryReader Reader
124100497	124100458	FB764:EDLD	LicenseReceived	11/13/2010 5:06:21 PM	License was sent to user.
124100496	124100458	FB764:EDLD	LoginInit	11/13/2010 5:06:21 PM	User was authenticated successfully.
124100494	124100458	FB764:EDLD	LicenseReceived	11/13/2010 4:26:46 PM	License was sent to user.
124100495	124100458	FB764:EDLD	Sync	11/13/2010 4:26:46 PM	Sync task requested: Sync file reader task: GetRootFilesTask. Reader: RootBoundaryReader Reader
124100493	124100458	FB764:EDLD	LoginInit	11/13/2010 4:26:45 PM	User was authenticated successfully.
124100492	124100458	FB764:EDLD	Sync	11/13/2010 4:14:29 PM	Sync task requested: Sync file reader task: GetRootFilesTask. Reader: RootBoundaryReader Reader
124100491	124100458	FB764:EDLD	LicenseReceived	11/13/2010 4:14:29 PM	License was sent to user.
124100490	124100458	FB764:EDLD	LoginInit	11/13/2010 4:14:29 PM	User was authenticated successfully.
124100489	124100458	FB764:EDLD	Sync	11/13/2010 4:13:39 PM	Sync task requested: Sync file reader task: GetRootFilesTask. Reader: RootBoundaryReader Reader
124100488	124100458	FB764:EDLD	LicenseReceived	11/13/2010 4:13:39 PM	License was sent to user.
124100487	124100458	FB764:EDLD	LoginInit	11/13/2010 4:13:38 PM	User was authenticated successfully.
124100483	124100458	FB764:EDLD	LoginInitFailed	11/13/2010 3:57:54 PM	Failed client authentication as username: ALLENABLE does not have a valid license.

Figure 17: Sample License History

Notes about License History:

- LoginInit = User has been authenticated against the server.
- LicenseGranted = License has been issued but the user has not yet retrieved the license.
- LicenseReceived = License has been issued and the user has retrieved it.
- If the administrator changes the expiration date on a license, you will see another set of LicenseGranted and LicenseReceived activity.
- More License History functionality will be provided in future releases.

Chapter 4 Configuring Export Types

The exportconfiguration.xml file is configured by SPATIALinfo. For more information on specific export issues, contact SPATIALinfo. Refer to "Appendix A: Export Tool ReadMe File" for information.

One example of a common situation where you want to control the export is when you want to turn off Fiber Trace and Splicing for a specific boundary type. Fiber lists can be exported without splicing details or tracing details for faster exporting or when not all fiber intelligence is needed for boundaries.

1. If the Sync Server service is running, navigate to **Control Panel > System and Security > Administrative Tools > Services**, select the **Spatialinfo Sync Server** service from the list, and click the **Stop** link.

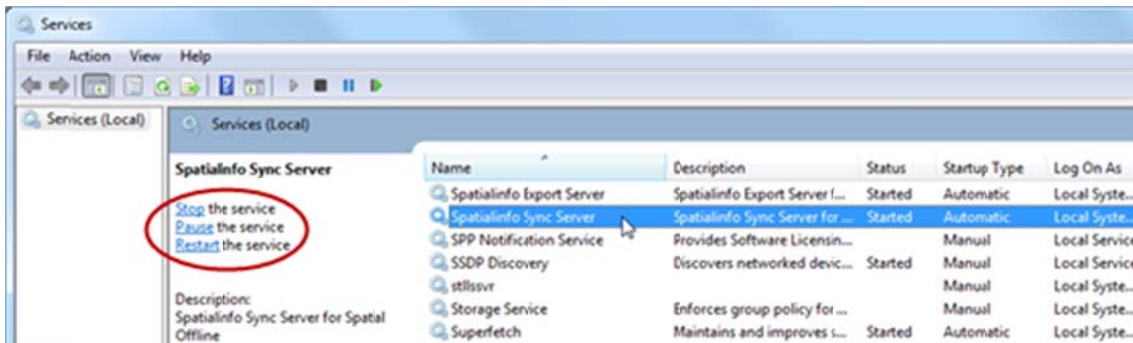


Figure 18: Windows Services

2. Go to the exportconfiguration.xml file locations. The Sync Server and Xaml Export each have a copy of this file.
3. Locate the following string:


```
<BoundaryConfiguration instanceClassName="Boundary"
boundaryType="Region" childQueryType="Node" runFiber="true">
```
4. Change runFiber to **false**. This skips all fiber processing for that specific boundary. Changing runFiber to **true** again exports all fiber and splicing and tracing details.
5. Click the **Restart** link to restart the service.

Note: The default setting is set to **true**. Individual boundary instances are not supported, nor are node level boundaries.

Chapter 5 Client Installation and Setup

SpatialOFFLINE exe is configurable for XP, Vista, and Windows 7 client machines. The auto-installer completes all installation requirements.

5.1 First-Time Client Installation

1. Run the **setup.exe** file located in the spatialOFFLINE file.
2. The InstallShield Wizard opens. Click **Next**.

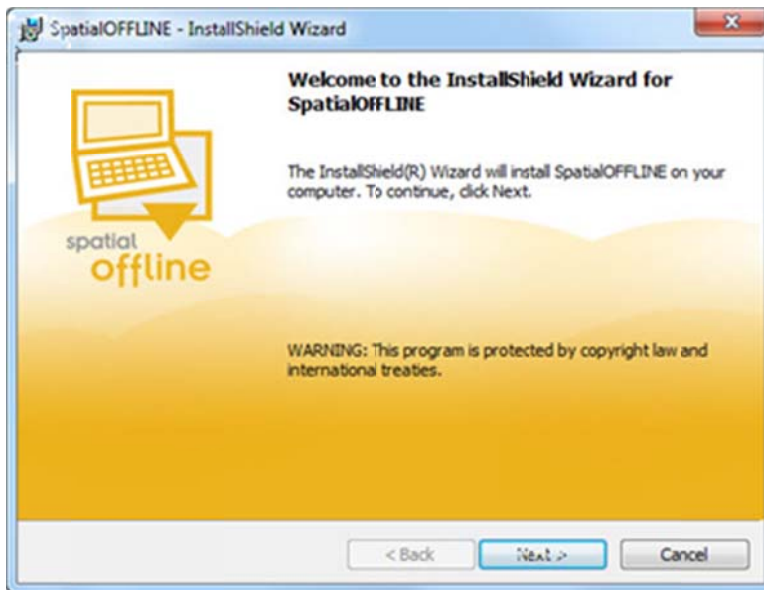


Figure 19: InstallShield Wizard

3. Click **Next** to accept the default folder (**C:\Program Files\SPATIALInfo\SpatialOFFLINE**).

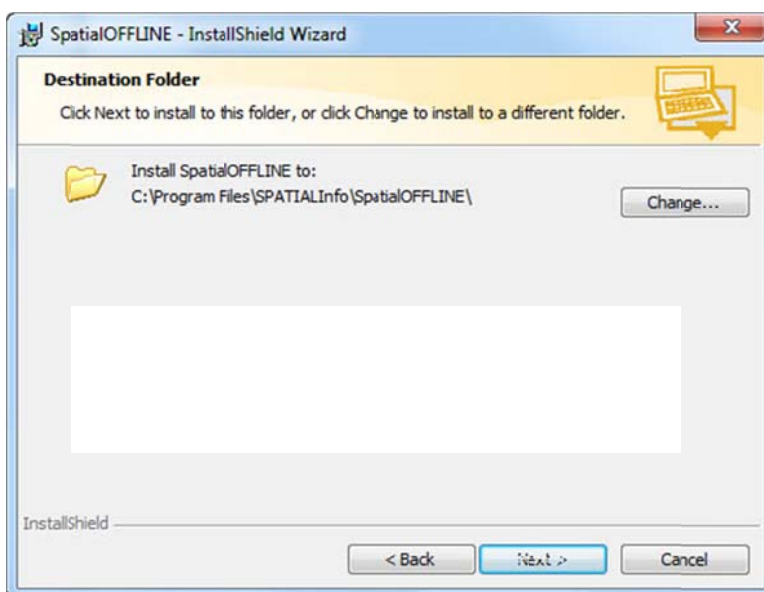


Figure 20: Destination Folder

- Click **Install** to begin the installation.

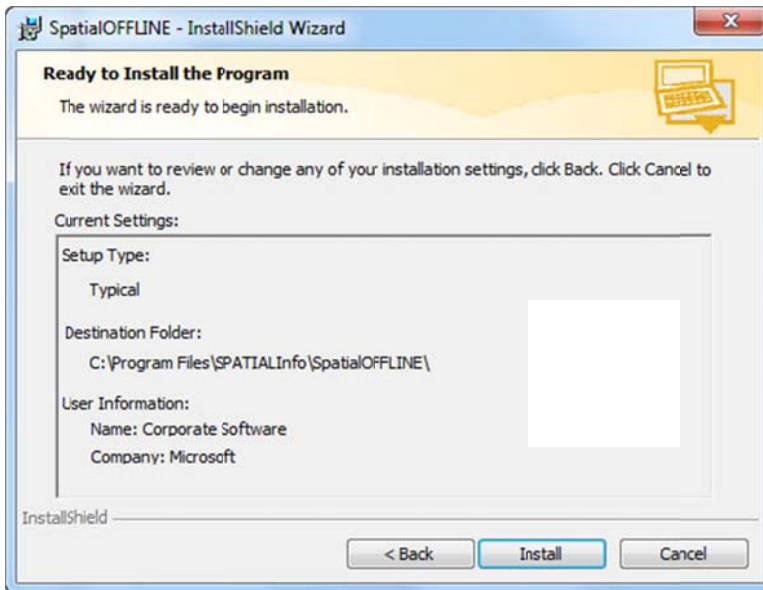


Figure 21: Begin the Installation

- When the installation is complete, ensure the **Launch the program** check box is selected and click **Finish**.

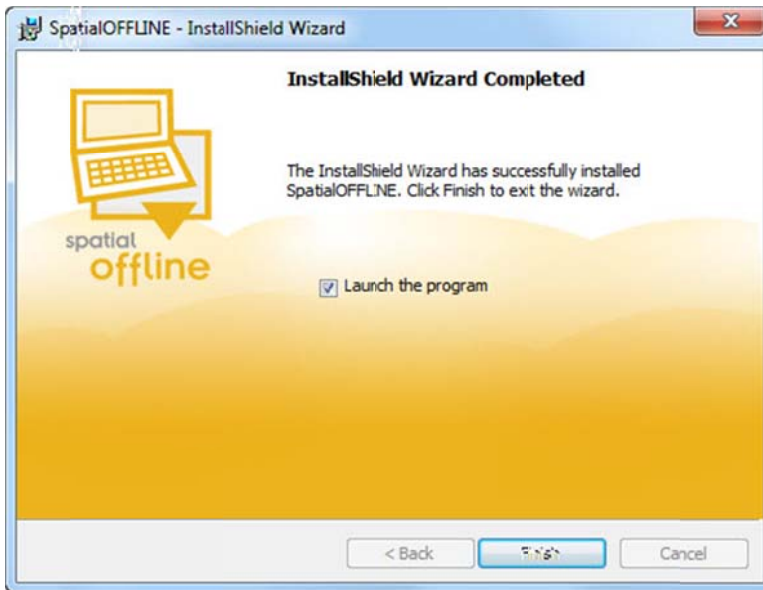


Figure 22: Installation Completed

- A message box opens, advising that you will be routed to the spatialOFFLINE System Settings window. Click **OK**.

7. The spatialOFFLINE System Settings menu opens.



Figure 23: SpatialOFFLINE System Settings

The three expandable sections on this window are described in the following table:

Name	Description	Refer to Section...
Basic Settings	Identify location of the local maps folder and the sync server URL.	5.3
Regional Subscriptions	Displays list of available regions.	5.4
Database Tools	Rebuilds the Maps database.	5.5

5.2 Accessing the System Settings Menu

The spatialOFFLINE System Settings Menu (Figure 23) automatically opens the first time spatialOFFLINE is installed.

To access the system settings menu thereafter, select **OFFLINE > System Settings** from the menu.

5.3 Setting a Sync Server URL

After setting up a Sync Server (see Chapter 1), you need to add the URL.

1. Navigate to the System Settings Menu per section 5.2.
2. Click the down-arrow on the **Basic Settings** bar to open the section.

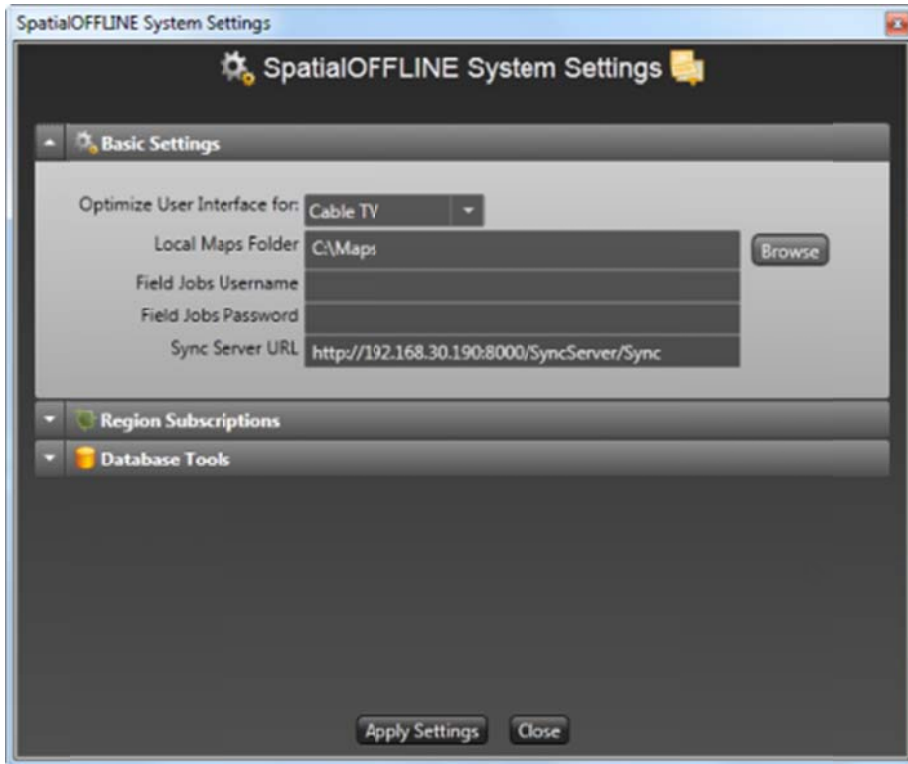


Figure 24 Basic Settings

3. To optimize the user interface, select either **Cable TV** or **Copper Telephone**.
4. The **Local Maps Folder** file path is automatically populated during installation.
5. Enter the **Sync Server URL** in the format:
`http://IPADDRESS:PORT/SyncServer/Sync`
Note: Replace *IPADDRESS* and *PORT* with your values.
6. Click **Apply Settings**.
7. Click **Close**.

5.4 Selecting/Changing Available Region(s)

WARNING: If region boundaries are redrawn in the SpatialNET database, the administrator must revise the group definitions and re-run the data extract. When that is complete, the administrator advises users to re-subscribe to the new region(s).

1. Navigate to the System Settings Menu per section 5.2.
2. Click the down-arrow on the **Region Subscriptions** bar to open the section.

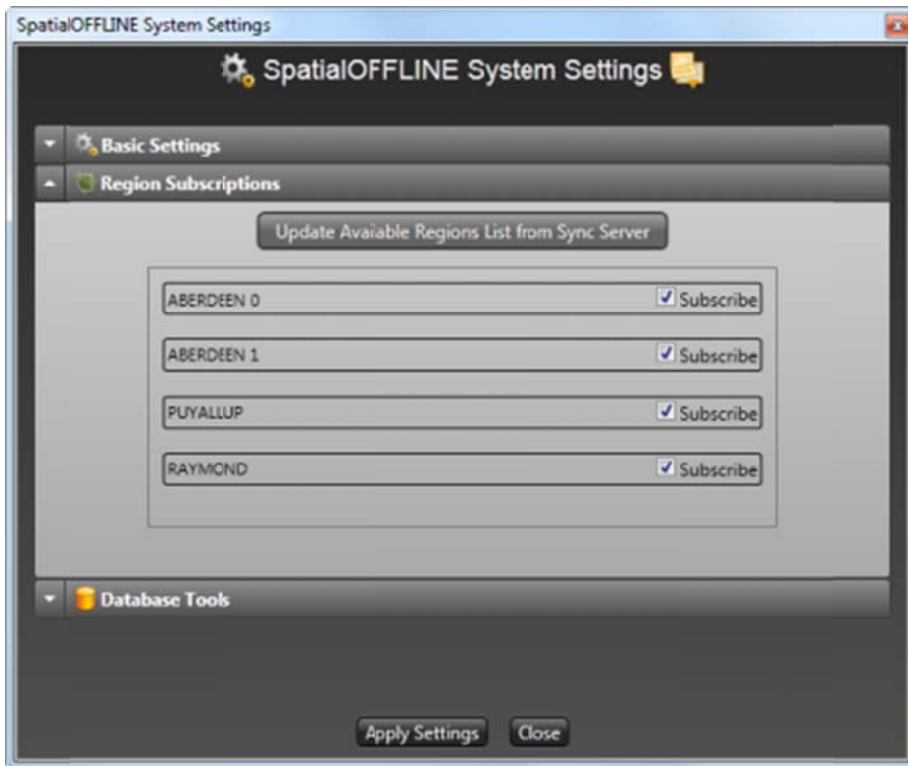


Figure 25: Region Subscriptions

3. Click **Update Available Regions List from Sync Server**.
Note: If new regions are added or existing regions are deleted, you must run a new export before the user sees the data.
4. Select the region(s) to view. You can change this at any time.
5. Click **Apply Settings**.
6. Click **Close**.

5.5 Rebuilding the Maps Database

1. Navigate to the System Settings Menu per section 5.2.
2. Click the down-arrow on the **Database Tools** bar to open the section.

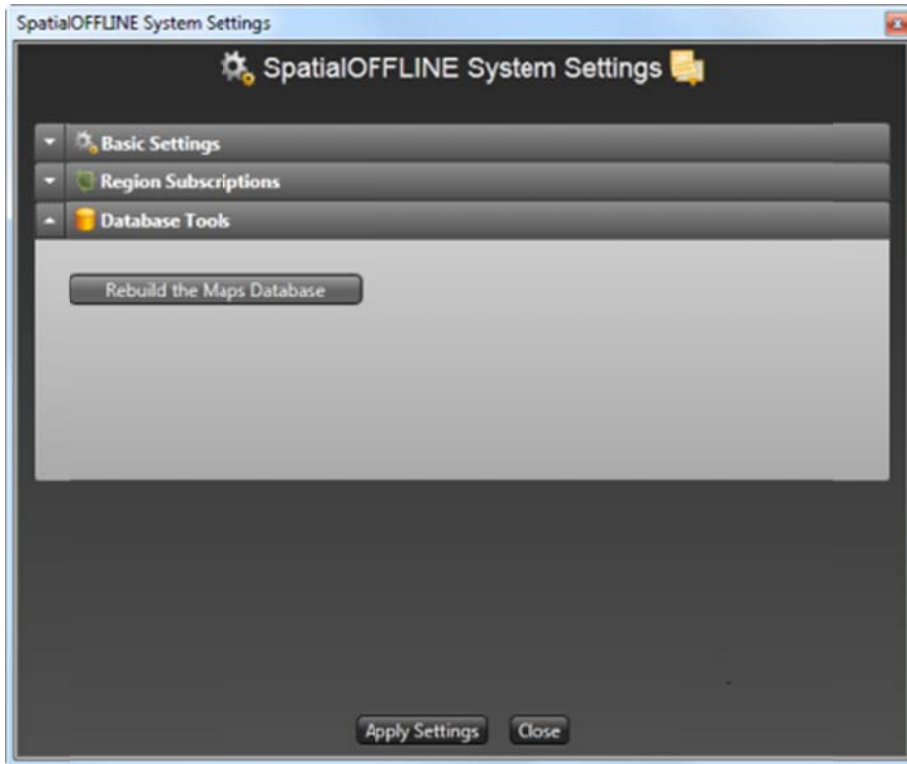


Figure 26: Database Tools

3. Click **Rebuild the Maps Database**.
4. Click **Close**.

5.6 Logging In to the Client

A client license is required for a user to be able to log in to a spatialOFFLINE client. Refer to section 3.4.4 “Setting Up Client Users”.

5.7 Upgrading the SpatialOFFLINE Client

Note: When removing a copy of spatialOFFLINE from a computer, no changes are made to the c:\Maps folder. However, if there are significant changes in the new version of the software, the maps files will become invalid. The solution is to delete the region folders in the c:\Maps folder before installing the new client, and then resynchronize after the new client is installed.

1. Remove the existing copy of spatialOFFLINE before installing the upgrade:
 - a. Navigate to **Start > Control Panel > Programs and Features**.
 - b. Select spatialOFFLINE from the programs list.
 - c. The Uninstall dialog box opens. Click **Remove the Application from this computer**.
2. After spatialOFFLINE is removed, follow the steps in section 5.1 “Client Installation and Setup” to install the upgrade.

Chapter 6 Troubleshooting

6.1 Sync Server

6.1.1 Sync Server Service

If the Sync Server does not start after installing and entering the server connection in the Server Manager tab, check whether the Sync Server is running in Windows Services:

1. Navigate to **Start > Control Panel > System and Security > Administrative Tools > Services**.
2. Scroll down on the list of services to **Spatialinfo Sync Server**.
3. Verify it is in the **Services** list (see Figure 27).

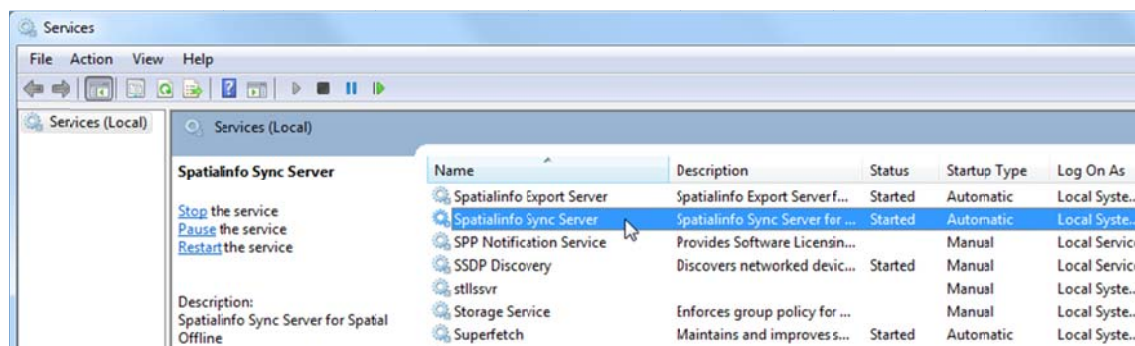


Figure 27: Windows Services

- a. If the service is not in the list, it means the installation failed. Refer to the installation log.
- b. Verify the status is **Started**.
 - If the service is not started, click the **Start** link.
 - In some cases, the service may be running but not available. Refer to the installation log for information about the error(s).

6.1.2 Sync Server Installation Issues

Sync Server installs automatically. For installation problems, refer to the installation log. The message level is set to the default value of Warn, which should provide enough information to determine what failed. Contact Support at SPATIALinfo if you need help determining the error.

Refer to the *XAML Exporter Tool Configuration Guide* for export configuration settings.

6.1.3 Changes to the Configuration File

If you make changes to the Sync Server configuration file, you must stop and restart the Sync Server Service to be able to see the changes.

6.1.4 Issues Related to Large Regions

If the number of nodes is ≥ 800 and the number of segments is $\geq 5,000$ OR if the number of segments is $\geq 10,000$ regardless of how many nodes, the export will not attempt fiber tracing and a warning message is written to the export log. Examples of log entries for successful and failure are as follows:

Successful:

```
16:52:49 [Worker Thread 2] INFO ilders.FiberTraceExportBuilder - Processing fiber tracing for
boundary: DURHAM. Child nodes: 386 and segment count: 3133
```

Failures:

```
17:05:34 [Worker Thread 2] WARN ilders.FiberTraceExportBuilder - **WARNING: Boundary: GTA
Central will not export fiber tracing as it's node count: 1039 and segment count: 8299 go past
the limits of 800 nodes and 5000 segments.
```

```
17:09:24 [Worker Thread 2] WARN ilders.FiberTraceExportBuilder - **WARNING: Boundary:
Miss&Etbk will not export fiber tracing as it's node count: 851 and segment count: 7499 go past
the limits of 800 nodes and 5000 segments.
```

```
17:34:08 [Worker Thread 2] WARN ilders.FiberTraceExportBuilder - **WARNING: Boundary: YORK
will not export fiber tracing as it's node count: 706 and segment count: 10778 go past the limits
of 800 nodes and 5000 segments.
```

6.2 Client

6.2.1 Server Connection Issues

Service Not Found

If you try to connect from the client, the Sync Server service must be running on the server. If it is not, you will see an error message indicating that the service cannot be found. Refer to section 6.1.1 “Sync Server Service” to start the service.

Server Not Found

If you cannot find the server, try the following:

- Using Windows Explore, type in the URL for the server, which should open an informational window. If you get an error and cannot connect, this indicates a server issue.
- Ensure you can ping the server from the client machine. If you cannot ping the server, the client will not work.
- Another alternative issue could be the port number. Try pinging substituting the machine address with `localhost:8000`. This will tell you whether the service is up, alive, and functional. If you can find the server on the local server machine but not on the client, something has blocked your communications.

6.2.2 Client Machine RAM Issues

When running at minimum or near minimum specifications (refer to “Spatial Database Region Size” section at the front of this document), the user may experience performance issues when the region is greater than the recommended size (300–500 nodes).

6.2.3 Issues Related to Redrawing Region Boundaries

If region boundaries have been redrawn, but it does not appear the region map files have been updated after an export was run, follow the steps in the WARNING box at the beginning of Chapter 2.

Appendix A: Export Tool ReadMe File

=====
SpatialOFFLINE Export Tool
(c) 2009-2010 SpatialINFO Inc.

=====
Configuration Options for the export tools
=====

The following elements can be added to the Config file for the offline export tools to change the default behaviour of the offline exporter, which is to export all data for all regions and nodes using the update only export mode.

=====
Configuration option: SpecificExportCommand
=====

This option controls what is exported. You can control the following items using a comma delimited list of options.

The options mean the following:

UPDATE MODE	whether we're going to export deltas only or all data
BOUNDARY TYPES	where do we want to export data for - just regions or just nodes
EXPORT TYPES	what data do we want to export

There are also "quick flags" which can be used in place of a given "UPDATE MODE, BOUNDARY TYPE, EXPORT TYPE" combination:

SpecificExportCommand will take one of the following formats:

```
<add key="SpecificExportCommand" value="<update mode>,<boundary type>,<export type>,<export type>.." />
```

OR

```
<add key="SpecificExportCommand" value="<quickflags>" />
```

OR

```
<add key="SpecificExportCommand" value="<updatemode>,<regionnodeflags>" />
```

For example:

```
<add key="SpecificExportCommand" value="FullExport,Regions,FiberTracing"/>
```

The following lists give all the export options that apply to the SpecificExportCommand configuration parameter:

UPDATE MODES

FullExport	All items should be generated, regardless of them being up to date or not.
UpdateOnly	Only files that have new data that was changed will be generated.

BOUNDARY TYPES

Regions	These are the root level boundaries and typically (but not necessarily) called Region.
Nodes	These are all child boundaries for a Region or other root level boundary type.

EXPORT TYPES

AllRegions	This is the core dictionary of region or root level files that are available in the database.
FiberDictionaries	These are the fiber cable and colour dictionaries.
XamlGraphics	These are the xaml graphics files rendered for all boundaries.
XmlData	These are the entity data files rendered for all items found inside of the boundaries.
FieldJobs	This is the core set of field job data.
RedLine	This is all the redline information for a field job.
FieldSplicing	This is all the field splicing information for a field job.
CircuitTags	This is all the circuit tag information for a field job.
FiberSplicing	This is the fiber splicing report that is built for all region / root level boundaries.
FiberTracing	This is the fiber tracing report that is built for all region / root level boundaries.
Templates	This is the theme information that is used by the offline clients.

QUICK FLAGS

AllUpdateNoFiber	Only updated files and no fiber will be constructed. No other flags are needed.
AllUpdate	All items will be generated should they be out of date or changed. No other flags are needed.
AllFullNoFiber	Full export and no fiber will be constructed. No other flags are needed.
AllFull	A full export of all types will be done. No other flags are needed.

REGION/NODE FLAGS

RegionDataAndGraphicsOnly	Data and graphics files only for region / root level boundaries. Must be combined with either 'FullExport' or 'UpdateOnly' to specify the export type.
NodeDataAndGraphicsOnly	Data and graphics files only for child level (below region) boundaries. Must be combined with either with 'FullExport' or 'UpdateOnly' to specify the export type.

EXPORTING DATA FOR A SPECIFIC BOUNDARY OR REGION

To export a single boundary (eg. a single node or a single region without nodes), add the SpecificExportBoundary element to the config file with the name of the boundary:

```
<add key="SpecificExportBoundary" value="Barrie" />
```

To export a single region, including all files within the region, add the SpecificExportRegion element to the config file with the name of the boundary:

```
<add key="SpecificExportRegion" value="Barrie" />
```

Note that if 'SpecificExportCommand' is left out of the configuration file it will default to 'AllFull' and all items will be exported and built regardless of type and date.

Example:

Exporting all region graphics and region level attributes for just the Barrie polygon:

```
<add key="SpecificExportCommand" value="FullExport,Regions,XamlGraphics,XmlData" />  
<add key="SpecificExportBoundary" value="Barrie" />
```

CONFIGURATION OF THE SYNC SERVER RUN MODE

The Sync Server can run either as an export server which generates files, a Sync Server which keeps the files on the client in sync with the files on the server, or as both so that one service performs double duty (this is not recommended except in certain testing situations).

The key has the following format:

```
<add key="ServerMode" value="Sync" />
```

EXPORT FLAGS

SyncAndExport The server will function both as a Sync Server and Export Server.

Sync The server will function only as a Sync Server. The Export Server listener will not be activated and not be available to issue export requests.

Export The server will function only as an Export Server. The Sync Server listener will not be activated and offline clients will not be able to connect to it.

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