



Location Intelligence

## Spectrum Spatial™ Analyst

Version 2019.1

# Release Notes

This document contains information about Pitney Bowes Spectrum Spatial™ Analyst Release 2019.1.

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# What's New

## Name Change to Spectrum Spatial

As of version 2019.1, the Location Intelligence Module (LIM) and Enterprise Routing Module (ERM) sell together as the Spatial Module. Applications, such as the Management Console, refer to “Spatial” instead of “Location Intelligence” and “Routing” instead of “Enterprise Routing”. The Spectrum™ Technology Platform installer lists this module as the “Spatial and Routing Module”.

The Spatial Module is part of a single sales product called Spectrum Spatial that includes Spectrum Spatial™ Analyst, which is a web mapping client. Spectrum Spatial™ Analyst installs separately from the Spectrum™ Technology Platform, is managed by Spectrum Spatial Manager, and uses Spectrum Spatial Services. Spectrum Spatial Extensibility extends Spectrum Spatial™ Analyst using the Angular extensibility framework to create unique components.

The Spatial Module includes: Spectrum Spatial Manager which manages all aspects of Spectrum Spatial; Spectrum Spatial Services, which are OGC, REST and SOAP, are used by application developers to create unique solutions and include both the spatial and routing services; Spectrum Spatial and routing stages are in the Enterprise Designer to add spatial capability to flows and custom services exposed via flows. Note that the routing stages and services require separately purchasing routing data that must deploy into Spectrum.

## Administration Console Settings Migrate to Spatial Manager

This release is the first step towards integrating the management of the Spectrum Spatial™ Analyst into the Spectrum Spatial Manager to provide a single unified management console that covers both the Spatial server and Spectrum Spatial™ Analyst.

The functionality in the Spectrum Spatial™ Analyst Administration Console has moved to Spectrum Spatial Manager on the **Project Properties** tab. As part of this migration, the following configurations are now also stored as new types of Named Resources within the Spectrum Spatial repository instead of the file system on the Spectrum Spatial™ Analyst server.

- NamedProject
- NamedFunctionalityProfile
- NamedDataBind
- NamedExternalGeocodingConfiguration
- NamedExternalRoutingConfiguration
- NamedExternalTilingConfiguration

- NamedExternalWMSConfiguration
- NamedPrintTemplate

Spectrum Spatial Manager supports the same languages as the Spectrum™ Technology Platform, which is English, French, German, Spanish, and Japanese.

## Configurations in Spatial Manager

You can set the following configurations on the **Project Properties** tab in Spectrum Spatial Manager. Enhancements have been made to the number of configurations available and to the information that they capture.

- **Functionality profiles:** Previously, the functionality profile would determine if a user could save a project or not. There is now a page in Spectrum Spatial Manager for managing users folders, and a user can save a new project if they had a user folder created for them.
- **Search datasets:** This is a new term for the Spectrum Spatial™ Analyst Locator Uploader, which uploads CSV files for use via the Spectrum Spatial™ Analyst Locate service. The functionality remains the same – admins have two pre-defined search datasets that they can load CSV data in to. The two locator configurations are on the Spectrum Spatial™ Analyst server.
- **Geocoding configurations:** Spectrum Spatial™ Analyst supports the same geocoder services. However, geocoding configurations can now hold values for **service options** for customizing configuration. Previously, many of the options were not exposed, so Spectrum Spatial™ Analyst fell back to server default values.
- **Routing configurations:** Routing configurations previously supported deprecated on-premise routing API and Spectrum On-Demand. They now also support the newer on-premise REST routing API and also the new Geozone service available with the Location Intelligence (LI) APIs. Routing configurations can now hold values for **service options** to customize each configuration. You can add a default travel cost (for both time and distance) to each configuration for when users first add a travel boundary in Spectrum Spatial™ Analyst; this option customizes the cost based on the requirements of the map project.
- **External WMS configurations:** There is a new, improved interface to browse and add WMS layers to a WMS configuration. Support has also been added to specify sub-domains for WMS URLs
- **External Tile configurations:** There is a new, improved interface to create external tile configurations. Administrators can easily toggle between the two predefined settings for Spherical Mercator and Europa and then continue to specify custom options.
- **Data bindings:** The functionality for specifying data binds remains the same, but there is an improved drop-down for choosing the tables to include, which shows the table name and repository path of the table
- **Print templates:** The user interface (UI) for designing print templates has been re-written with significant improvements over the previous designer. The designer now lets you zoom in and out of the template to see and edit details but still get an overview of the template. When adding items to the designer, you can click and draw them. Previously they would be placed in the center and

had to be moved into position. There is now a 1 millimeter (mm) and 10 mm grid overlayer facility, and when drawing, moving, or resizing elements, they are automatically snapped to a 1 mm grid.

- **Find Nearest and custom symbols:** The Find Nearest symbols are now part of the range of symbols deployed with Spectrum. Any other Spectrum symbols (or custom symbols) can also be used for Find Nearest. You can also use the same symbols for style override in map layers. Both the new Find Nearest symbols and the existing pin point symbols now align correctly on the map with the pin bottom indicating the location. Previously, such symbols were shown centred over a feature with the pin further south than the location. If you have custom Find Nearest symbols, you will need to manually add them to Spectrum by creating a folder for them following the instructions under *Spatial Manager, Custom Symbols* in the *Spectrum Spatial Guide*.
- **Global project settings:** The **Global Project Settings** replaces the **Settings** tab in the Administrator Console and contains the Spectrum Spatial™ Analyst session timeout, help link, Google base map key, and other settings. The settings save to a configuration file in the repository called the Analyst Configuration.
- **Query management:** New parameterized views in Spectrum Spatial Manager replaces the administrator-defined queries created in the Administrator Console. Parameterized views use full SQL syntax (such as OR conditions and table joins). A parameterized view is a significant enhancement to what was previously available with Spectrum Spatial™ Analyst. They can be created using the create view table functionality on the **Advanced** tab by entering SQL with parameters in the WHERE clause. For details, see the Spatial Manager documentation under *Managing Spatial* in the *Spectrum Spatial Guide*. All administrator (admin) defined queries will be migrated to the repository and added as parameterized views that can be managed in Spatial Manager.
- **Permission reports:** The permission reports for projects are now in the permission reporting functionality available in Spectrum Spatial Manager. The resource permissions report contains Map Projects and all other resources. Reports can be created based on the resource type (which groups permissions by each resource) or by user-role (which groups permissions by each user and role).
- **Map and table reports:** Map and table reports have been removed. You can now go to the **Detail** page of a layer to see the resources that reference it, such as all the Named Maps and Named Map Projects that reference the layer.

## Configurations in Spectrum Spatial™ Analyst

The following configurations are managed in Spectrum Spatial™ Analyst or directly on the Spectrum Spatial™ Analyst server.

- **Map Projects:** You can still manage Map Projects on the Project Settings dialog in Spectrum Spatial™ Analyst, but the project definitions and permissions now persist into the Spectrum Spatial repository as Named Map Projects. Permissions for projects can be managed either on the Project Settings dialog or the Spectrum Spatial Manager **Resource Permissions** page.
- **Find Nearest:** The Find Nearest functionality is simplified; you do not have to create a separate Find Nearest configuration and associate it with a map project. Spectrum Spatial™ Analyst has

a new tab on the Project Settings dialog to specify if a layer is available for Find Nearest search. To add the same set of layers for Find Nearest to many projects, you can add them to a Named Map and then add the Named Map to each project. Spectrum Spatial™ Analyst users can now see the Find Nearest layers in the legend and can also perform other queries on them in addition to Find Nearest searches. The map group in which the layer is contained becomes the Find Nearest category name. You can give both the map group and layer display names (friendly names) for the Find Nearest category picker. Existing Find Nearest configurations do not migrate so you must enable Find Nearest for specific layers in each Map Project.

- **Usage statistics and address search logs:** The address search logs are within the usage logs. The usage logs are still configured by enabling them in the Spectrum Spatial™ Analyst shared properties file. You can access the logs directly from the folder where they save to on the Spectrum Spatial™ Analyst server.
- **Documentation links and utilities:** The documentation links and utilities that were on the **Home** tab of the Administration Console are now available on the Spectrum Spatial™ Analyst home page. Click the help (?) button to see documentation links within a panel.
- **Brands:** Brands remain unchanged and are configured using brand.css and placed into the Spectrum Spatial™ Analyst customer configurations folder. Brands can be assigned to a Map Project directly on the Project Settings dialog in Spectrum Spatial™ Analyst and are no longer associated with a functionality profile.
- **Edit templates:** Edit template XML files are unchanged. They are created manually and placed into the Spectrum Spatial™ Analyst customer configurations folder. A Map Project returns a list of edit templates so they can be associated with layers added to the project.
- **Map Information templates and template designer:** The template designer is unchanged and is accessible from the **Settings** tab in Spectrum Spatial™ Analyst. How templates save is unchanged, and they persist in the Spectrum Spatial™ Analyst customer configurations folder.

## Improvements

When clicking the map to see information on the left panel, the panel displays any features available in the annotation layer at that location.

You no longer need to preface Spectrum Spatial™ Analyst role names with “analyst”. Role names created in the Spectrum Management Console can be assigned permissions to a Map Project.

## Deprecating Features

The utility for the “Analyst Locate JavaScript API” is deprecated and removed. Customers who wish to use the Locate service in other solutions can make direct requests the Locate REST service API. For more information, see Search Datasets in the *Spectrum Spatial Guide* under *Managing Spatial* and *Spectrum Spatial™ Analyst*.

## Fixes

The following issues have been fixed in this release:

Bug ID	Description
CONN-37149	Spectrum Spatial™ Analyst now supports choosing coordinate systems in EPSG:3004.
CONN-37715	It was not possible to have an ampersand (&) and comma (,) in the friendly name of named map and named layers
CONN-39929	The tooltips on the three top-right buttons are not translated to French.
CONN-40413	In earlier versions, the visibility state of labels was always saved as true in map projects. Now, the visibility chosen in the legend is persisted when a project is saved.
CONN-40841	For a large number of tables, the Template Designer does not let you scroll to and choose the last table.
CONN-40976	It is not possible to edit or delete the databind configuration if it includes an apostrophe in its name.
CONN-41121	In print templates the Scale Value shown in the PDF output is missing "1:".
CONN-41454	When using an application link-in to show results in Spectrum Spatial™ Analyst, two identical sets of query results display in the legend panel.
CONN-41931	The cursor displays a hand symbol when hovering over the field labels in the side panel of a map information template created in the Template Designer. As a result, the label looks like a hyperlink.
CONN-42134	Spectrum Spatial™ Analyst now supports choosing coordinate systems in EPSG:3068.
CONN-43672	Map information on WMS business layers does not display when the Web Mapping Service (WMS) and base map are in different coordinate systems.

## Documentation

The following documents are available with this release of Spectrum Spatial™ Analyst.

SNo	Document	Format	Locales	Description
1.	<i>Installation Guide</i> for Windows and Linux	HTML	English only	This guide explains how to install Spectrum Spatial™ Analyst on a Windows Server and Linux. The topics covered in this guide include system requirements, installation steps, and uninstalling.
2.	<i>Extensibility User Guide</i>	PDF	English Only	This guide describes how to use the Spectrum Spatial™ Analyst Extensibility Platform for custom applications.
3.	<i>API Guide</i>	HTML	English Only	This guide describes API specifications.
4.	<i>User Guide</i>	HTML	All Supported Locales	This guide is for Spectrum Spatial™ Analyst users and provides an overview of the Spectrum Spatial™ Analyst web mapping application.
5.	<i>Release Notes</i>	PDF	English Only	This document provides an overview of what is new and lists limitations and known issues with this release.

After installation, all the documentation for Spectrum Spatial™ Analyst is accessible from **Project Home > Help**.

**Note:** For optimal performance in Internet Explorer, we recommend viewing documentation with Internet Explorer (IE) Edge.

## Supported Operating Systems

Spectrum Spatial™ Analyst supports the following operating systems:

1. Windows 2012R2

2. Windows Server 2016
3. Ubuntu 16.04
4. RHEL 7.1
5. CentOS 7.0

## Supported Devices and Web Browsers

Spectrum Spatial™ Analyst supports the following devices and web browsers:

### **Web Browsers for Desktop:**

- Microsoft Internet Explorer (IE) 11 and Edge
- Mozilla Firefox 62.0.3
- Google Chrome 77.0.3865.120
- Safari 13.0.2 on Mac

### **Web Browsers for Devices:**

- Safari (iPad) on iOS 13.1.3
- Safari (iPhone) on iOS 13.1.3
- Chrome on Android 6.0
- Microsoft Edge on Windows 10

## Supported Languages

Spectrum Spatial™ Analyst supports the following languages:

- cy (Welsh)
- cz (Czech)
- da (Danish)
- de (German)
- en (English - default)
- en\_AU (English - Australian)
- en\_GB (English - British)
- es (Spanish)
- et (Estonian)
- fi (Finnish)
- fr (French)
- it (Italian)



- ja (Japanese)
- nl (Dutch)
- pt (Portuguese)
- tr (Turkish)

To launch Spectrum Spatial™ Analyst in one of these languages, add a “lang” parameter to the end of the URL. For example:

```
https://server:port/connect/analyst/?lang=en_GB
```

## Installation Notes

When installing Spectrum Spatial™ Analyst, the Spectrum administrator (admin) must provide their credentials because both new installations and upgrades create named resources in Spectrum, which Spectrum Spatial™ Analyst uses.

## Java Runtime Changes

The Spectrum Spatial™ Analyst installer no longer deploys a Java runtime due to licensing changes introduced by Oracle. We recommend installing Azul or Oracle Java, as these are our tested vendor versions, before installing or upgrading Spectrum Spatial™ Analyst.

Users with Azul JDK on Linux require Lucida fonts for Spatial map rendering. To obtain this font family, download and install the Zulu Commercial Compatibility Kit (ZCCK). Download and install instructions can be found at

<https://www.azul.com/products/zulu-and-zulu-enterprise/cck-downloads>.

## Security Access

A new Spectrum Spatial™ Analyst installation creates the Analyst guest role and the Analyst guest user specified during the install process (if configuring guest access is chosen as part of the installation). Previously, administrators manually added the role and user using the Spectrum Management Console. Manual configuration is still available, and documented, for adding guest access after installing.

## Migrating Resources During Upgrade

For upgrades, the Spectrum Spatial™ Analyst 20191.1 installer includes a utility that migrates Spectrum Spatial™ Analyst resources from an existing customer configuration folder to the repository. All new Named Resources migrate from the Spectrum Spatial™ Analyst customer folder to the repository under a folder called *Analyst*. Users who have saved Map Projects have repository folders created for them under *UserFolders*, and their projects migrate to these folders.

Before upgrading Spectrum Spatial™ Analyst, back up the customer configuration folder: the default path is `C:\Program Files\Pitney Bowes\SpectrumSpatialAnalyst\customerconfigurations`.

## Limitations and Known Issues

### Limitations

The following are the limitations in this release:

- **Internet Explorer:** Performance is not optimal on Internet Explorer (IE) 11. For better performance, we recommend using a browser listed under [Supported Devices and Web Browsers](#) on page 8.
- **Thematic maps:** Thematic maps do not render on a query layer when the query executes using a parameterized view.
- **Using maps in British National Grid projection:** Including British National Grid raster maps in a map project that is in a different projection (such as EPSG:3857) displays the raster maps with a 2 meter offset to the base map in an East/West direction. The re-projection is on the Spectrum Spatial™ Analyst client-side, which does not include the NTv2 conversion for the United Kingdom (UK). The issue is not present when the map project is in EPSG:27700.
- **Using project settings as a spatial-sub-admin:** A spatial-sub-admin using the Project Settings page to edit existing map projects needs folder WRITE permissions on the repository path where the map project is located. They also need at minimum folder READ permission on the folders where the referenced resources, such as the functionality profile, are located. When a spatial-sub-admin sets permissions, they also need WRITE permission on the folders for referenced resources (because permissions set for the project also cascaded to referenced resources).
- **Using EPSG:4326 raster layers with Spectrum Spatial™ Analyst:** The Raster maps in Spectrum Spatial, such as MRR or MapInfo Grid (MIG) that are in a geographic projection, such as EPSG:4326 projection do not correctly align with other maps in Spectrum Spatial™ Analyst. This is due to the way the Mapping Service renders EPSG:4326 maps. We recommend making these kinds of maps available through the Spectrum Spatial Tile Service (or the WMS service) and not through the Mapping Service.

- **Using other projections with Google as a base map:** When adding Google maps as a base map, the map project must always be set to EPSG:3857. This is because Google maps are rendered using Google's own JavaScript APIs and the option to re-project them in Spectrum Spatial™ Analyst is not available.
- **Using labels layers with EPSG:4326 projections:** Labels will not align with the underlying maps if the map project is in geographic projection such as EPSG:4326. If labels are enabled for any layers added to a map project, we recommend that a different projection be chosen such as EPSG:3857.
- **Non-EPSG raster layers:** If the projection of a Spectrum Spatial raster named layer or named map does not specify an EPSG code, it cannot render in Spectrum Spatial™ Analyst. Spectrum Spatial™ Analyst needs to know the existing EPSG code to perform a re-projection of the data.
- **Rendering multiple raster layers:** If there is more than one raster layer added to a single named map and they are in different projections, then Spectrum Spatial™ Analyst only renders the first raster layer. All of the raster layers in a named map are projected in Spectrum Spatial™ Analyst in one go and must have the same existing EPSG code.
- **Using SVG icons in annotations:** In Internet Explorer 11 and Edge, the legend icons for annotations are not shown in the print preview page or the final PDF, because HTML2Canvas does not support SVG. HTML2Canvas is the library that Spectrum Spatial™ Analyst uses for capturing legend information onto PDF.
- **Symbols greater than 30px in size:** If maps with graduated symbols, pie charts, or bar charts larger than 30px are uploaded, then the symbols may appear cropped on the map in Spectrum Spatial™ Analyst. For end-user created thematic maps, Spectrum Spatial™ Analyst handles and correctly displays symbols up to 64px in size without cropping.
- **Querying WMS or Tile services:** Full querying of layers is not a capability of WMS or Tile services. Hence, the query function appears disabled for map projects containing only WMS or Tile Business data. However, map information shown using a map click still work.
- **Printing zoom ranged maps:** Maps with a zoom range may not display in print previews at certain zoom levels especially at the lowest and highest zoom range levels. The print preview collation requests a larger size of image compared to the tile size present on Spectrum Spatial™ Analyst. This difference in size sometimes leads to layers falling outside their prescribed zoom range, making them invisible in print preview.
- **Named Maps with in-line layers:** Maps with a zoom range may not display in print previews at certain zoom levels especially at the lowest and highest zoom range levels. The print preview collation requests a larger size of image compared to the tile size present on Spectrum Spatial™ Analyst. This difference in size sometimes leads to layers falling outside their prescribed zoom range, making them invisible in print preview.
  - MapWithLabelLayerAndRangeTheme
  - MapWithLabelLayerAndOverrideTheme
  - MapWithLabelLayerAndIndividualValueTheme
  - WorldcapGradSym

### Known Issues

The following are the known issues in this release:

Bug ID	Description
CONN-30659	While printing, the print preview and print PDF do not honor the border defined for a map in the print template.
CONN-33841	UTF-8 characters (such as Japanese) in the copyright text are not supported in the print PDF output and display incorrectly.
CONN-33842	UTF-8 characters are not supported in static text when exporting to PDF.
CONN-34830	The address search does not return all results when the search term contains a full stop (.) or comma (,).
CONN-34872	If a table has a percent symbol (%) in its name, the layer does not load in Spectrum Spatial™ Analyst.
CONN-40559	On a mobile device, when pinching and zooming a business layer with Google as the base map, the business layer sometimes goes out of sync. This issue occurs on the fractional zoom levels.
CONN-40609	Raster reprojection fails to render tiles in geographic projections other than EPSG:4326, which uses degrees as a unit instead of meters. Projections that use meters as a unit should work.
CONN-40870	On hiding or unhiding layers from the legend panel, you may notice that the previous layer or label appears for few seconds.
CONN-40988	When accessing a map project in Spectrum Spatial™ Analyst via HTTPS named layers that contain a character with an accent, such as é, the map does not display.
CONN-41830	Editing a feature with Multipoint geometry is not supported.
CONN-42137	Address Search Error. The address search fails with a wild card search when there are more than two words.
CONN-43770	It is not possible to save the state of the thematic layer in map projects if it has been created on a query layer.



3001 Summer Street  
Stamford CT 06926-0700  
USA

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