

Enterprise Routing Module Data

Version Q2 2019

Release Notes

This document contains information about the Spectrum™ Technology Platform Enterprise Routing Module data. You have access only to the modules you have licensed. To evaluate any other modules, contact your Pitney Bowes Software account executive for a trial license key.

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What's New

Note: The packaging of the Enterprise Routing Module (ERM) data bundle has changed effective with the 2017 Q4 data release. Earlier the databases were bundled as a package in executable (.exe) files, but now the datasets are shipped in a zipped archive with the .spd file extension. Read all the information in the document carefully.

Understanding the regional and country-specific datasets

To understand the way data bundles and datasets are organized, consider [Regional Bundles](#) and [Country-specific Datasets](#) as explained here.

Table 1: Regional Bundle Contents

The Regional data bundles contain individual country datasets and a help (README.txt) file. The README.txt file has the link to the product documentation.

For example, the regional data bundle A1B062019.zip contains pedestrian and driving data files of the AMER region.

A1B062019.zip

1. AR_Driving.spd
 2. AR_Pedestrian.spd
 3. BM_Driving.spd
 4. BM_Pedestrian.spd
 5. BR_Driving.spd
 6. BR_Pedestrian.spd
 7. BS_Driving.spd
 8. BS_Pedestrian.spd
 9. CA_Driving.spd
 10. CA_Pedestrian.spd
 11. CL_Driving.spd
 12. CL_Pedestrian.spd
 13. CO_Driving.spd
 14. CO_Pedestrian.spd
 15. CU_Driving.spd
 16. CU_Pedestrian.spd
 17. MX_Driving.spd
 18. MX_Pedestrian.spd
 19. PY_Driving.spd
 20. PY_Pedestrian.spd
 21. US_Driving.spd
 22. US_Pedestrian.spd
 23. UY_Driving.spd
 24. UY_Pedestrian.spd
 25. README.txt
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Table 2: Country-specific Dataset Contents

The country-specific dataset contains data bundles of the same country and a help (README.txt) file. The README.txt file has the link to the product documentation.

For example, the dataset (C1A032019.zip) for Canada contains the data bundles of Canada only.

C1A032019.zip

1. CA_Driving.spd
 2. CA_Pedestrian.spd
 3. README.txt
-

Support for Commercial Vehicle Restrictions

This quarterly data refresh includes the support for Commercial Vehicle Restrictions (CVR). This functionality caters to fleet owners and operators who manage large trucks and other road-restricted vehicles. It enables efficient and seamless routing by providing truck restriction and preferred attributes based on the physical properties of a commercial vehicle.

The countries for which CVR is supported are marked with an asterisk (*) in the Data Vintage and Historic Traffic table in [Data Vintages and Speed Profile 2019 Q2](#) on page 5.

For more information about the available CVR options, refer to the Enterprise Routing Module documentation.

Support for Speed Profile Data

The Historic Speed Profile capability allows calculating the route and drive-time. It helps to target the time of the day rather than the average time. It makes calculations more accurate and useful for time of the day comparisons. For some of the countries where Historic Speed Profile data is not available, improved Segment-wise speed is available. Significant changes have been made to the structure of routing data to enable these new capabilities. Due to these changes, the new data sets are no longer compatible with earlier versions. These changes also need you to have Spectrum™ Technology Platform version 10.0 installed regardless of whether these new features are used.

For a list of countries and the type of speed attribution provided by the Enterprise Routing Module, see [Data Vintages and Speed Profile 2019 Q2](#) on page 5.

Data Vintages and Speed Profile 2019 Q2

Individual Country List

Table 3: Spectrum™ Technology Platform routing supports these countries and data vintages:

Regions	Country Name	ISO 3116-1 Alpha-2	Product Code	Data Vintage	Product file name	Support for Speed Profile
EMEA - Bundle Data	Austria*	AT	A1T	2019.03	A1T032019.zip	Historic Speed Profile
	Belgium	BE_LU	B1E	2019.03	B1E032019.zip	Historic Speed Profile
	Bulgaria	BG	B1G	2018.09	B1G032019.zip	Historic Speed Profile
	Switzerland	CH_LI	C1H	2019.03	C1H032019.zip	Historic Speed Profile
	Germany*	DE	D1E	2019.03	D1E032019.zip	Historic Speed Profile
	Denmark	DK	D1K	2019.03	D1K032019.zip	Historic Speed Profile
	Estonia	EE	E1E	2019.03	E1E032019.zip	Historic Speed Profile
	Finland	FI	F1I	2019.03	F1I032019.zip	Historic Speed Profile
	United Kingdom	GB	G1B	2019.03	G1B032019.zip	Historic Speed Profile
	Hungary	HU	H1U	2018.09	H1U032019.zip	Historic Speed Profile
	Ireland	IE	I1E	2019.03	I1E032019.zip	Historic Speed Profile
	Israel	IL	I1L	2018.12	I1L032019.zip	
	Latvia	LV	L1V	2019.03	L1V032019.zip	Historic Speed Profile
	Lithuania	LT	L1T	2019.03	L1T032019.zip	Historic Speed Profile

Regions	Country Name	ISO 3116-1 Alpha-2	Product Code	Data Vintage	Product file name	Support for Speed Profile
	Netherlands	NL	N1L	2019.03	N1L032019.zip	Historic Speed Profile
	Romania	RO	R1O	2017.09	R1O032019.zip	Segment-wise Speed
	Saudi Arabia	SA	S1A	2018.12	S1A032019.zip	Historic Speed Profile
	Slovakia	SK	S1K	2018.09	S1K032019.zip	Historic Speed Profile
	Slovenia	SI	S1I	2018.09	S1I032019.zip	Historic Speed Profile
	South Africa	ZA	Z1A	2018.06	Z1A032019.zip	Historic Speed Profile
	Spain	ES	E0S	2019.03	E0S032019.zip	Historic Speed Profile
	Turkey	TR	T1R	2018.09	T1R032019.zip	Segment-wise Speed
	Kenya	KE	K1E	2017.06	K1E032019.zip	Segment-wise Speed
	Lesotho	LS	L1S	2017.06	L1S032019.zip	Segment-wise Speed
	Mozambique	MZ	M1Z	2017.06	M1Z032019.zip	Segment-wise Speed
	Democratic Republic of Congo	CD	C1G	2017.03	C1G032019.zip	Segment-wise Speed
	Ghana	GH	G1H	2017.06	G1H032019.zip	Segment-wise Speed
	Albania	AL	A1L	2018.09	A1L032019.zip	Segment-wise Speed
	Belarus	BY	B1Y	2018.09	B1Y032019.zip	Segment-wise Speed
	Bosnia & Herzegovina	BA	B1A	2018.09	B1A032019.zip	Segment-wise Speed
	Moldova	MD	M1D	2018.09	M1D032019.zip	Segment-wise Speed
	Tanzania	TZ	T1Z	2017.06	T1Z032019.zip	Segment-wise Speed

Regions	Country Name	ISO 3116-1 Alpha-2	Product Code	Data Vintage	Product file name	Support for Speed Profile
	Jordan	JO	J1O	2017.06	J1O032019.zip	Segment-wise Speed
	Bahrain	BH	B1H	2018.12	B1H032019.zip	Segment-wise Speed
	Croatia	HR	H1R	2018.09	H1R032019.zip	Historic Speed Profile
	Czech Republic	CZ	C1Z	2019.03	C1Z032019.zip	Historic Speed Profile
	Egypt	EG	E1G	2018.12	E1G032019.zip	Historic Speed Profile
	France	FR	F1R	2019.03	F1R032019.zip	Historic Speed Profile
	Greece	GR	G1R	2018.09	G1R032019.zip	Historic Speed Profile
	Italy	IT	I1T	2019.03	I1T032019.zip	Historic Speed Profile
	Kuwait	KW	K1W	2018.12	K1W032019.zip	Historic Speed Profile
	Malta	MT	M1T	2018.09	M1T032019.zip	Historic Speed Profile
	Morocco	MA	M2A	2017.06	M2A032019.zip	Segment-wise Speed
	Nigeria	NG	N1G	2017.06	N1G032019.zip	Segment-wise Speed
	Norway	NO	N1O	2019.03	N1O032019.zip	Historic Speed Profile
	Oman	OM	O1M	2018.12	O1M032019.zip	Segment-wise Speed
	Poland	PL	P1L	2019.03	P1L032019.zip	Historic Speed Profile
	Portugal	PT	P1T	2019.03	P1T032019.zip	Historic Speed Profile
	Qatar	QA	Q1A	2018.12	Q1A032019.zip	Segment-wise Speed
	Russia	RU	R1U	2018.09	R1U032019.zip	Historic Speed Profile
	Sweden	SE	S1E	2019.03	S1E032019.zip	Historic Speed Profile

Regions	Country Name	ISO 3116-1 Alpha-2	Product Code	Data Vintage	Product file name	Support for Speed Profile
	Ukraine	UA	U1A	2018.09	U1A032019.zip	Segment-wise Speed
	United Arab Emirates	AE	A1E	2018.12	A1E032019.zip	Historic Speed Profile
APAC - Bundle Data	Australia	AU	A1U	2019.05	A1U032019.zip	RTD-based Speeds
	China	CN	C1N	2018.09	C1N032019.zip	RTD-based Speeds
	Hong Kong	HK	H1K	2019.03	H1K032019.zip	Historic Speed Profile
	India	IN	I1N	2017.06	I1N032019.zip	Segment-wise Speed
	Indonesia	ID	I1D	2019.03	I1D032019.zip	Segment-wise Speed
	Japan	JP	J1P	2019.04	J1P032019.zip	RTD-based Speeds
	Macau	MO	M1O	2018.09	M1O032019.zip	Segment-wise Speed
	Malaysia	MY	M1Y	2018.09	M1Y032019.zip	Historic Speed Profile
	New Zealand	NZ	N1Z	2018.11	N1Z032019.zip	RTD-based Speeds
	Philippines	PH	P1H	2018.09	P1H032019.zip	Segment-wise Speed
	Singapore	SG	S1G	2019.03	S1G032019.zip	Historic Speed Profile
	Taiwan	TW	T1W	2018.09	T1W032019.zip	Historic Speed Profile
	Thailand	TH	T1H	2019.03	T1H032019.zip	Segment-wise Speed
Vietnam	VN	V1N	2019.03	V1N032019.zip	Segment-wise Speed	

Regions	Country Name	ISO 3116-1 Alpha-2	Product Code	Data Vintage	Product file name	Support for Speed Profile
AMER - Bundle Data	Argentina	AR	A1R	2018.09	A1R032019.zip	Segment-wise Speed
	Bermuda	BM	B1M	2018.09	B1M032019.zip	Segment-wise Speed
	Brazil	BR	B1R	2019.03	B1R032019.zip	Historic Speed Profile
	Bahamas	BS	B1S	2018.09	B1S032019.zip	Segment-wise Speed
	Cuba	CU	C1U	2018.09	C1U032019.zip	Segment-wise Speed
	Paraguay	PY	P1Y	2019.03	P1Y032019.zip	Segment-wise Speed
	Uruguay	UY	U1Y	2019.03	U1Y032019.zip	Historic Speed Profile
	Colombia	CO	C1O	2019.03	C1O032019.zip	Segment-wise Speed
	Chile	CL	C1L	2018.09	C1L032019.zip	Segment-wise Speed
	Mexico	MX	M1X	2019.03	M1X032019.zip	Historic Speed Profile
	Canada	CA	C1A	2019.03	C1A032019.zip	Historic Speed Profile
	United States of America*	US	U1S	2019.03	U1S032019.zip	Historic Speed Profile

Note:

1. The countries marked with an asterisk (*) support Commercial Vehicle Restrictions (CVR).

June 2019 - Bundles

Table 4: Spectrum™ Technology Platform routing supports these regional data bundles:

Bundle Name	Product Code	Bundle Version	Product File Name
Asia Pacific - All countries bundle	P1B	Jun 2019	P1B062019.zip
Americas - All countries bundle	A1B	Jun 2019	A1B062019.zip
Europe, Middle East, and Africa - All countries bundle	C1B	Jun 2019	C1B062019.zip

Databases Sold Separately

Table 5: These databases are sold separately:

Regions	Country Name	ISO 3116-1 Alpha-2	Product Code	Data Vintage	Product file name
G2B	Great Britain - ITN Database	GB	G2B	2016.07	
J2P	Japan - No Highway Database	JP	J2P	2019.04	J2P062019.zip

Installation

Installing SPD-based Routing Data

This section describes the installation process of SPD-based routing data.

Downloading files

You can download the bundled `.zip` files from the e-store or Software Data Marketplace as usual.

Installing SPD-based Routing Data

Steps to deploy data depend on the version of Spectrum™ Technology Platform in use. However, in all cases, the first step is to extract the `.zip` file, which is the same as that of older routing data. For example, the A1B bundle contains the following `.spd` files:

- AR_Driving.spd
- AR_Pedestrian.spd
- BM_Driving.spd
- BM_Pedestrian.spd
- BR_Driving.spd
- BR_Pedestrian.spd
- BS_Driving.spd
- BS_Pedestrian.spd
- CA_Driving.spd
- CA_Pedestrian.spd
- CL_Driving.spd
- CL_Pedestrian.spd
- CO_Driving.spd
- CO_Pedestrian.spd
- CU_Driving.spd
- CU_Pedestrian.spd
- MX_Driving.spd
- MX_Pedestrian.spd
- PY_Driving.spd
- PY_Pedestrian.spd
- US_Driving.spd
- US_Pedestrian.spd
- UY_Driving.spd

- UY_Pedestrian.spd
- README.txt

Installing data using data import auto-extract feature

The advantage of using data import feature of Spectrum™ Technology Platform to install routing data garners advantage of the auto-extract feature. This feature enables auto extraction of data from the SPD files and places the unpacked data to a standard yet configurable location on your system. Once configured, you just need to copy the SPD file to the “dataimport” folder.

The installation places data at one of the three locations (dataimport, datastorage, or archive folders), which are configurable. The default location is <SpectrumLocation>. You can choose a different location to keep your data but if you have installed the data at the default location, in case of uninstallation of Spectrum™ Technology Platform, the data will also be deleted.

Installation locations can be one of the following:

- **dataimport folder:** When you choose the dataimport folder, Spectrum™ Technology Platform extracts the content of the SPD and stores the information about it. The default location is `<SpectrumLocation>/server/app/dataimport`. Once Spectrum is finished extracting, it deletes the SPD files to save space. You are advised to keep a copy of the downloaded file as a backup. You can edit the dataimport folder location by editing the `<SpectrumLocation>/server/app/conf/dataimportdirectories.properties` file. Since this is a temporary location used for extracting, the only reason for changing can be a concern about temporary disk space usage.
- **datastorage folder:** The second location is the permanent location of the data. The location is `<SpectrumLocation>/server/app/repository/datastorage/`. This location is large enough to hold all the data of routing, geocoding, or other modules you use. The data storage folder contains SPD formatted data, which for many countries is quite large. It needs to be on a disk that is optimized for the purpose. To change the configuration of data storage folder, you can edit the `spectrum.data.manager.storage.directory` property in the Data Manager section of the `<SpectrumLocation>/server/app/conf/spectrum-container.properties` file.

Note: For Windows users, the path separator is “forward” slash. For example, `E:/SpectrumData/` and not `E:\SpectrumData\`.

This is possible that this location is already modified for geocoding or address data.

- **archive folder:** You cannot change the archive location. It is turned off by default. When turned on, the SPD file is not deleted after extraction and is moved to `<SpectrumLocation>/server/app/repository/dataimport/archive` folder. To turn the archiving on, change the property from `false` to `true` in the `spectrum.data.manager.archive.data` section of the `spectrum-container.properties` file right under the location.

Configuring the Routing Data

Once the data has been extracted, the routing data needs to be configured as in previous versions into a database resource that is referenced in the dataflows and services. If the database requires keys, see the section on **Adding Modules** in the Spectrum™ Technology Platform **Installation Guide for Windows, Unix, and Linux** accordingly.

After installing the database files, use the Database Resource tool in the Management Console to define the database as a resource. For more information, refer to **Adding a Routing Database Resource** in the **Spectrum Spatial Guide**. You can do this using the Management Console or the Administration Command Line tool. In each case, you need to know the location of the data. If you have used the auto-extraction method, then you must know the folder location of the datastorage property.

For example, by default location after extracting the actual data path for the country looks like:

```
<SpectrumLocation>/server/app/repository/datastorage/Spatial/routing/
U1S_Driving_Sept_2018/central
```

Spectrum 12.0 and 12.1 users need to apply the following patches respectively to use the data for the release.

Release Version	Patch
12.0	CDQ 12.0 S33
12.1	CDQ 12.1 S10

Known Issues

- The dataset for Russia includes the driving dataset of 2018.09 vintage and the Pedestrian dataset of 2017.09 vintage. The Pedestrian dataset for Russia has been not refreshed to 2018.09 vintage due to quality issues with the corresponding input source data.
- Some instances of the Spectrum™ Technology Platform Enterprise Routing Module throw a timeout exception while adding the U1S dataset of the A1B database. This issue has been fixed in Spectrum 12.2 release. If you are using versions 11.1 or 12.1, you need the following patches installed to get the issue fixed:
 - CDQ 11.1 S62

- CDQ 12.1 S20
- Since December 2017 routing data release, the data attribution has been increased. The CVR information requires more RAM while adding the U1S dataset of the A1B database. If this data is used with existing 2GB of RAM, the Spectrum throws `Java heap space` error with default value `-Xmx2048m` in the `java.vargs`. This issue is fixed in Spectrum™ Technology Platform 12.2 as the value has been increased to `-Xmx4096m`, which is equivalent to 4GB.

To fix this issue in a release 12.1 or earlier, do the following:

1. Stop the Spectrum™ Technology Platform server.
2. Update the parameter `-Xmx2048m` to `-Xmx4096m` in the `java.vargs` file placed in the `<installation_directory>\server\modules\routing` directory. The final content of the file should be as `-Xmx4096m`

Note: When loading a large Enterprise Routing Module database, you might need to increase the memory of the routing remote component. To do this, set the value of the `-Xmx` parameter in the `java.vargs` file to a value larger than the size of the database.

3. Save the file and restart the server. You will be able to load the data successfully.



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