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Db2 Spatial Extender (7.4 11)

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Functions provided by the Db2 Spatial Extender component can be used to analyze data stored in row-organized tables. [Spatial Extender stores geospatial data in special data types](#), each of which can hold up to 4 MB. It also provides a spatial grid index to improve performance.

How data represents geographic features

In Db2 Spatial Extender, a geographic feature can be represented by one or more data items; for example, the data items in a row of a table.

How features, spatial information, spatial data, and geometries fit together

A summary of several basic concepts that underlie the operations of Db2 Spatial Extender such as geographic features, spatial information, spatial data, and geometries is provided.

Geometries

In Db2 Spatial Extender, the operational definition of geometry is “a model of a geographic feature.”

How to use Db2 Spatial Extender

The topics in this section describe how to set up Db2 Spatial Extender and how to work on projects that use spatial data.

Getting started with Db2 Spatial Extender

You should get familiar with the instructions for installing and configuring Spatial Extender in supported operating systems. Also, learn how to troubleshoot some of the installation and configuration problems that you might encounter as you work Spatial Extender.

Upgrading to Db2 Spatial Extender version 11.5

Upgrading to Db2 Spatial Extender to 11.5 requires more than installing Db2 Spatial Extender 11.5. You must perform the appropriate upgrade task for these systems.

Setting up spatial resources for a database

After you set up your database to accommodate spatial data, you are ready to supply the database with resources that you will need when you create and manage spatial columns and analyze spatial data.

Setting up spatial resources for a project

After your database is enabled for spatial operations, you are ready to create projects that use spatial data.

Setting up spatial columns

In preparing to obtain spatial data for a project, you should choose a coordinate system and spatial reference system and then provide one or more table columns to contain the data.

Populating spatial columns

After you create spatial columns and register the ones to be accessed by these visualization tools, you can populate the columns with spatial data by importing it or by inserting spatial data that you created using constructor functions, by using a geocoder to derive it from business data; or by using spatial functions to create it or to derive it from business data or other spatial data.

Db2 Spatial Extender in a partitioned database environment

The Db2 Spatial Extender can be used effectively in a partitioned database environment to perform spatial analysis against large customer data tables. Partitioned database environments are useful for running data warehousing applications that you can create with the SQL Warehousing Tool (SQW) in the Design Studio.

Using indexes and views to access spatial data

Use indexes and views to query spatial columns.

Analyzing and generating spatial information

Analyzing and generating spatial information requires an understanding of the environments in which you can submit queries and the guidelines on using spatial functions in conjunction with spatial indexes.

Writing applications and using the sample program

To write applications for Db2 Spatial Extender, you must understand the requirements and review the sample program.

Identifying Db2 Spatial Extender problems

To identify a Db2 Spatial Extender problem, you must determine the cause of the problem.

Catalog views

Use catalog views for Db2 Spatial Extender to obtain useful information about your spatial data.

Db2 Spatial Extender commands

Use these commands to set up Spatial Extender and to develop projects that use spatial data.

Stored procedures

Use Db2 Spatial Extender stored procedures to set up Db2 Spatial Extender and create projects that use spatial data.

Spatial functions

Use spatial functions to program your applications. Learn about the function usage and the factors that are common to all or most spatial functions.

Transform groups

Spatial Extender provides four transform groups that are used to transfer geometries between the database server the database or warehouse and a client application.

Supported data formats

Db2 Spatial Extender provides industry standard spatial data formats that you can use.

Supported coordinate systems

Db2 Spatial Extender uses a specific coordinate systems syntax and supported coordinate system values to provide a standard

textual representation for coordinate system information.



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