**• Raum- und Regionalplanung**
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# APGDO for SQLServer Native – Quickreference

APGDO for SQLServer Native is a GeoMedia Dataserver for SQLServer using the native „geometry" column-type of SQLServer 2008 R2 with OpenGIS metadata.
APGDO works with all GeoMedia Editions from Version 4.x to 6.x under Windows XP, Vista and 7 (32  bit and 64 bit).

You can use APGDO for free without warranty.

The dataserver is full read/write (including DDL) and supports all geometry types of GeoMedia with following restrictions:

– no support of arcs (SQLServer doesn't support arcs)
– all points of a collection of OrientedPoints have the same orientation
– no support of collections of TextPointGeometries
– external handling of CoordSystems using csf-files
– each table must have a numeric primary key (integer)

SpatialFilter is supported but only the MBR of the spatial filter is used.

NativeQuery is implemented for those types which use the spatial index.

## CoordSystem handling using folder EPSG:

SQLServer does not full support CoordSystem handling using the table „spatial_reference_systems" because it isn't possible to insert new rows. Therefore APGDO supports external handling of CoordSystems using EPSG-codes as SRID.

You have to create GeoMedia csf-files named „EPSGnnnnn.csf" and store them in the „EPSG" subfolder of APGDO program folder.
You also have to create a corresponding text-file with extend-information. These values are used as parameters for the creation of spatial indeces and for APGDO for ArcGIS.

**ConnectionProperties Dialog „ConnectInfo:**
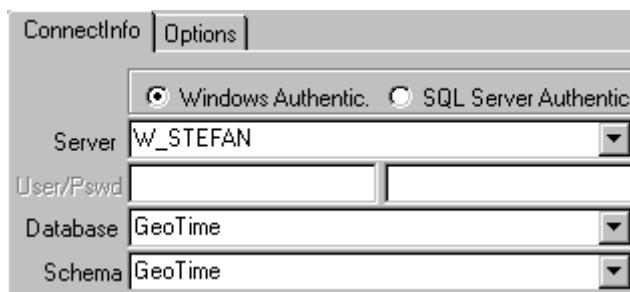


You have to choose a valid entry for „Schema". You can also use the predefined values „DEFAULT" or „ALL".
„DEFAULT" uses the default database schema of the user, DDL is supported.
„ALL" uses all database schemas and full qualified table names, DDL is not supported!

**ConnectionProperties Dialog „Options:**
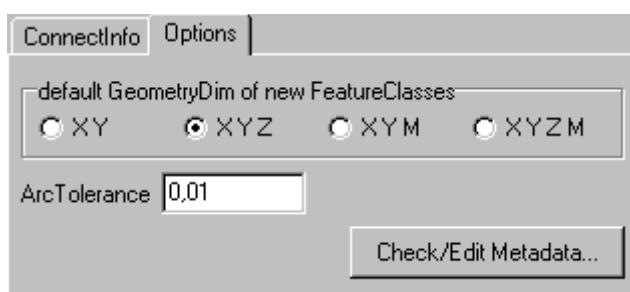


ArcTolerance is used for the approximation of arcs.

## ConnectionProperties Dialog „Check/Edit Metadata":



| | F_TABLE_S( | F_TABLE_NAME | F_GEOMETRY_CO | GEOMETRY_TYPE | SRID | XMIN | YMIN | XMAX | YMAX | TOLERAN( | GDO_O |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | GeoTime | DKM_GEBAEUDE | SDOGEOMETRY | MULTIPOLYGONZ | 31256 | -150000 | 250000 | 150000 | 450000 | | |
| | GeoTime | DKM_GRENZPUNK | SDOGEOMETRY | MULTIPOINTZ | 31256 | -150000 | 250000 | 150000 | 450000 | | SDOGE( |
| ▶ | GeoTime | DKM_GST | SDOGEOMETRY | MULTIPOLYGONZ | 31256 | -150000 | 250000 | 150000 | 450000 | | |
| | GeoTime | DKM_GST_SYMBOl | SDOGEOMETRY | MULTIPOINTZ | 31256 | -150000 | 250000 | 150000 | 450000 | | SDOGE( |
| | GeoTime | DKM_GST_TEXT | TEXT | MULTIPOINTZ | 31256 | -150000 | 250000 | 150000 | 450000 | | |
| | GeoTime | DKM_KAT_GEM | SDOGEOMETRY | MULTIPOLYGONZ | 31256 | -150000 | 250000 | 150000 | 450000 | | |
| | GeoTime | DKM_NUTZ_FL | SDOGEOMETRY | MULTIPOLYGONZ | 31256 | -150000 | 250000 | 150000 | 450000 | | |
| | GeoTime | DKM_POL_GEM | SDOGEOMETRY | MULTIPOLYGONZ | 31256 | -150000 | 250000 | 150000 | 450000 | | |
| | GeoTime | DKM_SG | SDOGEOMETRY | ULTILINESTRINGZ | 31256 | -150000 | 250000 | 150000 | 450000 | | |
| | GeoTime | Linie | GEOMETRY | ULTILINESTRINGZ | 31258 | 300000 | 250000 | 600000 | 450000 | 0,01 | |
| | GeoTime | RRU_WI_HUELLE | SDOGEOMETRY01( | MULTIPOLYGON | 31256 | -150000 | 250000 | 150000 | 450000 | | |
| | GeoTime | Test | SDOGEOMETRY | MULTIPOLYGON | 31256 | -150000 | 250000 | 150000 | 450000 | | |

Using this form you can create and edit OpenGIS metadata (GEOMETRY_COLUMNS) and create GeoMedia metadata for modification logging.

*create dbo.GEOMETRY_COLUMNS*
Creates table GEOMETRY_COLUMS using schema dbo. Used to store information for all geometry columns in the database.

*create GeoTime.GM_ModificationLog*
Creates table GM_ModificationLog using the selected schema or schema dbo.

*fill dbo.GEOMETRY_COLUMNS*
Scans the systemtables and fills the table

*set default bounds:*
overrides bound values of the selected rows using the values stored in folder EPSG

*update SRID:*
updates all (!!!) SRID values in the base table of the selected rows using the given value in table GEOMETRY_COLUMS;
Use this function carfully! Some programs (e.g. ArcGIS) do not store valid EPSG codes as SRIDs but internal SRIDs. So updating the SRID can cause problems with this programs.

**NativeQuery**
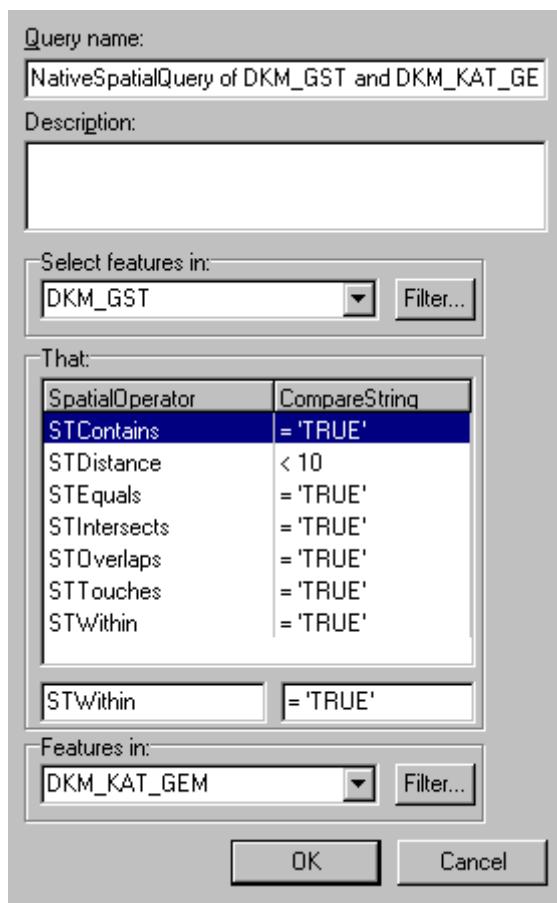


Using this example APGDO builds the SQL-statement:

Select  A.*
from  DKM_GST as A,  DKM_KAT_GEM as B
where STWithin(A.GEOMETRY, B.GEOMETRY) = 'TRUE'

**Metadata:**

In read-only mode APGDO works whithout any additional metadata. You can increase performance using OpenGIS-metadata (dbo.GEOMETRY_COLUMNS).

For read-write operations there must exist the tables for GeoMedia modification logging.

**GEOMETRY_COLUMNS:  (Schema dbo)**

| | | |
|---|---|---|
| F_TABLE_CATALOGN | VARCHAR(255), | |
| F_TABLE_SCHEMA | SYSNAME not null, | |
| F_TABLE_NAME | SYSNAME not null, | |
| F_GEOMETRY_COLUMN | SYSNAME not null, | |
| GEOMETRY_TYPE | INT not null, | OpenGIS GeometryType |
| SRID | INT not null, | EPSG-Code |
| // APGO Extensions | | |
| XMIN | float, | |
| YMIN | float, | |
| XMAX | float, | |
| YMAX | float, | |
| TOLERANCE | float, | ArcTolerance |
| GDO_ORIENTATION | NVARCHAR(255), | Field, which holds Orientation |
| GDO_TEXT | NVARCHAR(255), | Field, which holds Text |
| GDO_ROTATION | NVARCHAR(255), | Field, which holds TextRotation |
| GDO_TEXT_FORMAT | NVARCHAR(255), | Field, which holds TextForma |
| GDO_RASTER | NVARCHAR(255), | Field, which holds RasterGeometry |
| | | |
| // not used | | |
| G_TABLE_CATALOG | NVARCHAR(255), | |
| G_TABLE_SCHEMA | NVARCHAR(255), | |
| G_TABLE_NAME | NVARCHAR(255), | |
| STORAGE_TYPE | INT, | |
| MAX_PPR | INT, | |
| COORD_DIMENSION | INT | |

**GM_ModifiedTables:**
**GM_ModifiactionLog:**

Tables for GeoMedia modification logging. Use „Check/Edit Metadata" to create the tables in the correct schema.

**Registry:**

For use with WebMap you can set the key DoDummyCS in
*HKEY_CURRENT_USER\Software\Aufhauser-Pinz\APGDO\*
to False

In „normal" mode APGDO uses a temporary Access Connection to handle GeoMedia metadata. If the value is set to false the tables are build in memory. This increases connect time, but causes problems using some Queries.