



Performance & Best Practices Desktop - EN

Link: <http://geocom.click/performance>

1. ArcGIS Desktop

1.1. installation

1.1.1. selected features only

Link:

https://wiki02.eggits.net/download/attachments/344281775/image12-28_19-44-59.png

1.2. extended settings

1.2.1. print/export

Link:

https://wiki02.eggits.net/download/attachments/344281775/image12-28_15-13-55.png

1.2.1.1. temporary metafile size limit = max

1.2.1.2. output raster buffer size = 32 megabytes

1.3. program start up

1.3.1. drive connections

1.3.1.1. quantity

1.3.1.2. Attention! Network drive!

1.3.1.3. no base nodes

1.3.1.4. "dead" connections

1.3.2. user profile

1.3.2.1. results list of tools

1.3.2.2. normal.mxt

1.3.2.3. profile

1.3.2.3.1. delete after update

1.3.3. ArcGIS Online connections

Link:

https://wiki02.eggits.net/download/attachments/344281775/image12-28_19-42-41.png

1.4. map

1.4.1. for analysing

1.4.1.1. PerfQAnalyzer

1.4.2. layer

1.4.2.1. quantity

1.4.2.1.1. remove duplicates if necessary

1.4.2.1.2. remove empty ones

1.4.2.2. visibility

1.4.2.2.1. switch off when not in use

1.4.2.2.2. setting scale range

1.4.2.2.3. definition query

1.4.2.3. define selectable layers

1.4.2.3.1. windows registry

1.4.2.4. symbology

1.4.2.4.1. point

1.4.2.4.1.1. simple markers

1.4.2.4.1.2. simple shapes

1.4.2.4.1.3. picture marker instead of halo

1.4.2.4.1.4. EMF-file instead of BMP-, PNG- or JPG/JPEG (if only one colour)

1.4.2.4.2. line

- 1.4.2.4.2.1. simple instead of cartographic lines
- 1.4.2.4.2.2. same symbology for multi layer symbols
- 1.4.2.4.2.3. avoid offset and line patterns
- 1.4.2.4.2.4. avoid wide and pattereded lines

1.4.2.4.3. polygon

- 1.4.2.4.3.1. Consider simplified symbols with no outlines
- 1.4.2.4.3.2. simplified outlines
- 1.4.2.4.3.3. fillings with as few as possible layers
- 1.4.2.4.3.4. picture fill: EMF- files instead of BMP-, PNG- or JPG/JPEG (if only one colour)

1.4.2.4.4. avoid symbol categories/classes across several layers

1.4.3. basemap layers

Link:

https://wiki02.eggits.net/download/attachments/344281775/image12-28_19-41-50.png

- 1.4.3.1. clear cache
- 1.4.3.2. hardware acceleration
- 1.4.3.3. Q- button

1.4.4. print

1.4.4.1. rasterizing

Link: <http://desktop.arcgis.com/de/arcmap/latest/map/map-export-and-print/about-map-printing.htm#GUID-7FC19EE5-E3C3-488E-8798-79910C5C05E5>

1.5. editing

1.5.1. general

1.5.1.1. avoid projection

- 1.5.1.2. do not start in full extent
- 1.5.1.3. number of vertices
- 1.5.1.4. avoid very small/big objects
- 1.5.1.5. minimise enabled/selectable layers
- 1.5.1.6. use simplified legends
- 1.5.2. snapping
 - 1.5.2.1. quantity
 - 1.5.2.2. push space bar
- 1.5.3. use feature cache

2. GEONIS

- 2.1. installation
 - 2.1.1. selected features only
- 2.2. configuration
 - 2.2.1. variables in the legend
 - 2.2.2. picture organization
- 2.3. GEONIS Administrator
 - 2.3.1. reset window positions
 - 2.3.2. picktool
 - 2.3.2.1. only objects from selectable layers
 - 2.3.3. topology module
 - 2.3.3.1. reset edge references when splitting two selected polygons
 - 2.3.3.1.1. disable for Enterprise Geodatabases
 - 2.3.4. projects
 - 2.3.4.1. avoid MXD- start up file
 - 2.3.4.2. avoid .lyr- files

2.3.4.2.1. use_original_connection

2.3.4.2.1.1. "false" for File-Geodatabase

2.3.4.2.1.2. "true" for Enterprise Geodatabase

2.3.4.3. define legend profiles

2.4. text renderer

2.4.1. do not display anchor points

3. infrastructure

3.1. hardware

3.1.1. server

3.1.1.1. virtualization

3.1.1.1.1. same physical host

3.1.1.1.2. no overallocation of resources

3.1.1.1.3. same virtual switch

3.1.1.2. network

3.1.1.2.1. bandwidth

3.1.1.2.1.1. min. gigabit

3.1.1.2.2. latency

3.1.1.2.2.1. as low as possible (<1ms)

3.1.2. processor

3.1.2.1. high single-thread performance

3.1.2.2. high clock frequency

3.1.3. RAM

3.1.3.1. no large influence

3.1.3.2. tend to over-dimension

3.1.4. hard disk

3.1.4.1. prefer fast (NVMe) SSDs

3.2. software

3.2.1. virus protection

3.2.1.1. define exceptions

3.2.2. updates/patches

3.2.3. device driver

3.2.4. energy options

3.2.4.1. BIOS

3.2.4.2. host

3.2.4.3. machine

3.2.5. pagefile

3.2.5.1. system managed

4. geodatabases

4.1. File Geodatabase

4.1.1. repair geometries

4.1.2. reorganize

4.1.2.1. monthly

4.1.3. zip

4.1.3.1. read-only

4.1.4. organization

4.1.4.1. use ArcCatalog

4.1.4.2. zip for transfer

4.1.5. refresh schema

4.2. Enterprise Geodatabase

4.2.1. refresh schema

4.2.2. zip

4.2.2.1. daily/weekly

4.2.2.2. reeset or delet versions

4.2.3. rebuild indexes

4.2.3.1. after zipping

4.2.4. update statistics

Link: http://desktop.arcgis.com/de/arcmap/latest/manage-data/geodatabases/recommended-version-administration-workflow.htm#ESRI_SECTION1_64493B3A25904C779B3F502D8FFC

4.2.4.1. after zipping

4.2.4.2. weekly/monthly

4.2.5. SQL server

4.2.5.1. version

4.2.5.2. optimizing

4.2.5.2.1. traceflags

4.2.5.2.2. memory

4.2.5.2.3. ad hoc workloads

4.2.5.2.4. cost threshold of parallelism

4.2.5.2.4.1. 50

4.2.5.2.5. max. degree of parallelism

4.2.5.2.5.1. 4-8

4.2.5.2.6. policy

4.2.5.2.6.1. perform volume maintenance tasks

4.2.5.2.6.2. lock pages in memory

4.2.5.2.7. analysis

Link: <https://github.com/BrentOzarULTD/SQL-Server-First-Responder-Kit>

4.2.5.3. DB's

4.2.5.3.1. geometry data type

4.2.5.3.1.1. GEOMETRY

4.2.5.3.1.2. SDEBINARY

4.2.5.3.2. recovery model

4.2.5.3.2.1. SIMPLE

4.2.5.3.2.2. FULL

4.2.5.3.3. compatibility level

4.2.5.3.4. file (.mdf / .ldf)

4.2.5.3.4.1. size

4.2.5.3.4.2. separation

4.2.5.4. temp DB

4.2.5.4.1. file quantity

4.2.5.4.1.1. 4

4.2.5.4.2. file size

4.2.5.4.2.1. 1-x GB

4.2.5.4.3. separation

4.2.5.5. disk

4.2.5.5.1. 64k

4.2.5.5.2. high IOPS

4.2.5.6. maintenance

Link: <https://ola.hallengren.com/>

4.2.5.6.1. backup

4.2.5.6.1.1. transaction log

4.2.5.6.2. DBCC CHECKDB

4.2.5.6.3. index & statistics

4.2.5.7. sde.dbtune

4.2.5.7.1. GEOM_SRID_CHECK

Link: <http://desktop.arcgis.com/de/arcmap/latest/manage-data/gdbs-in-sql-server/configuration-parameters-sqlserver.htm#GUID-DAB946AF-C160-4487-944E-34D2E4B2265E>

4.2.5.7.1.1. false

4.3. indices

4.3.1. attributive

4.3.1.1. definition query

4.3.1.2. query

4.3.1.3. unique/foreign key fields

4.3.1.4. GEONIS Solutions

4.3.1.4.1. SEW: ...\\media\\sew\\db\\index\\

4.3.1.4.2. ELE: ...\\media\\ele\\db\\indexe\\

4.3.1.4.2.1. cross section

```
<index_delete tablename="ELE_QS_KABEL"
name="I_KABEL_REF" />
<index_delete tablename="ELE_QS_KABEL"
name="I_QS_REF" />
<index_delete tablename="ELE_QS_ROHR"
name="I_ROHR_REF" />
<index_delete tablename="ELE_QS_ROHR"
name="I_QS_REF" />
<index_delete tablename="ELE_QS_ROHR_ROHR"
name="I_QS_REF" />
```

4.3.2. spatial

Link: <https://github.com/geocom-gis/GeocomDatabaseManagementTools>

4.3.2.1. GEOMETRY

4.3.2.1.1. bounding box

4.3.2.1.2. LLLL

4.3.2.1.2.1. for small extents

4.3.2.2. SDEBINARY

4.4. fields

4.4.1. quantity

4.4.1.1. e.g. GeoStatistic

4.4.2. data type

4.4.2.1. avoid large text fields

4.4.2.2. prefer short integer

5. Basic checklist for (performance) problems

5.1. Are the minimum system requirements met?

Link: <http://www.systemrequirementslab.com/Client/Standard/?apikey=50F41142-39B0-4061-97C2-BA7B7FE43D0E&refid=1186&item=10913>

5.2. Are all data sources affected?

5.3. Are all machines affected?

5.4. Are all users affected (same machine)?

5.5. Local file geodatabase was tested?

5.6. GEONIS was tested without overcharging and/or without using customizations?

Link: [geonis: ohne %C3%9Cberladungen oder kundenspezifische Anpassungen getestet?](#)