

DBs in Offline

- Information are taken from DBs
- Databases for fast changing information
- Static information more efficient via xml-files (StationList)
- Offline uses Manager for finding the data
- MySQL and SQLite implemented via precompilerflag
→ not mixable in one installation
- SQLite more efficient, but requires local disk-space
- Auger Master at BUW
- Open server (direct copy) at BUW: `db.auger.uni-wuppertal.de`

General idea of DBs in Offline

- Each DB 'X' has name X_N_Y:
 - N version, e.g. '0', changed if table-definitions change
 - Y part, e.g. 'A', if handled with different parts (never used)
- Each table has 'last_modified' field
- Each query asks for one entry:
 - ... order by last_modified desc limit 1;
- Entries in DBs are never changed, only 'over-written' by new entry
- New 'versions' should increment the software-version, so the old status could be reproduced

MySQL and DBs in Offline

```
> mysql -u Mocca -pSibyll -h db.auger.uni-wuppertal.de
AERA_2_A
AERA_3_A
AERA_4_A
Atm_Aerosol_1_A
Atm_Cloud_1_A
Atm_GOES_0_A
Atm_Lidar_1_A
Atm_Molecular_1_A
Atm_Quality_0_A
BadPeriod_0_A
FD_Calib_0_A
FD_Calib_1_A
test
validate_Atmosphere_0_A
validate_Atmosphere_1_A
validate_Atmosphere_0_A
validate_Atmosphere_1_A
validate_Atmosphere_0_A
validate_Atmosphere_1_A
validate_Atmosphere_0_A
```

```
rautenbe@trauti:~$ mysql -u Mocca -pSibyll -h db.auger.uni-wuppertal.de
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 179680
Server version: 5.5.40-0+wheezy1 (Debian)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| AERA_2_A |
| AERA_3_A |
| Atm_Aerosol_1_A |
| Atm_Cloud_1_A |
| Atm_GOES_0_A |
| Atm_Lidar_1_A |
| Atm_Molecular_1_A |
| Atm_Quality_0_A |
| BadPeriod_0_A |
| FD_Calib_0_A |
| FD_Calib_1_A |
| test |
| validate_Atmosphere_0_A |
| validate_Atmosphere_1_A |
| validate_Atmosphere_0_A |
| validate_Atmosphere_1_A |
| validate_Atmosphere_0_A |
| validate_Atmosphere_1_A |
+-----+
20 rows in set (0.03 sec)
```

HowToGet DBs

Dumps of the Dbs for local MySQL installation:

`http://auger.uni-wuppertal.de/AugerDB/`

SQLite files for download:

`http://auger.uni-wuppertal.de/SQLite/`

Daily script to dump/sqlite Dbs, but only sporadic update on web
(to be changed?) (`bin/MySQL2SQLite.sh`)

Within Offline in `bin/`

`DBCreatenSync.sh`

or (depending on MySQL/SQLite installation):

`fetchSQLiteDBs.sh`

HowToGet DBs

Dumps of the Dbs for local MySQL installation:

<http://auger.uni-wuppertal.de/AugerDB/>

Auger DB dumps

MySQL Dump-Files (bzip2'ed)	Date	Size
AERA_2_A.sql.bz2	2018-10-01	0 MB
AERA_3_A.sql.bz2	2018-10-01	4 MB
AERA_4_A.sql.bz2	2018-10-01	6 MB
Atm_Aerosol_1_A.sql.bz2	2018-10-01	171 MB
Atm_Aerosol_2_A.sql.bz2	2018-10-01	119 MB
Atm_Cloud_1_A.sql.bz2	2018-10-01	964 MB
Atm_GOES_0_A.sql.bz2	2018-10-01	28 MB
Atm_Lidar_1_A.sql.bz2	2018-10-01	6 MB
Atm_Molecular_1_A.sql.bz2	2018-10-01	129 MB
Atm_Quality_0_A.sql.bz2	2018-10-01	1 MB
BadPeriod_0_A.sql.bz2	2018-10-01	0 MB
FD_Calib_0_A.sql.bz2	2018-10-01	833 MB
FD_Calib_1_A.sql.bz2	2018-10-01	265 MB
validate_Atmosphere_Aerosol_0_A.sql.bz2	2018-10-01	0 MB
validate_Atmosphere_Cloud_1_A.sql.bz2	2018-10-01	0 MB
validate_Atmosphere_GOES_0_A.sql.bz2	2018-10-01	0 MB
validate_Atmosphere_Lidar_1_A.sql.bz2	2018-10-01	0 MB
validate_Atmosphere_Molecular_0_A.sql.bz2	2018-10-01	0 MB
validate_Atmosphere_Quality_0_A.sql.bz2	2018-10-01	0 MB
validate_FD_Calib_0_A.sql.bz2	2018-10-01	0 MB

Directories of other version:

20170901

auger.uni-wuppertal.de/SQLite/

but only sporadic update on web
(SQLite.sh)

for local installation):



DBs in Offline: Configuration

- Configuration of DB-host in Offline:
`cmake -DDBHOST="$(echo iklx{172..178}.fzk.de)"`
- When installed, check:
`share/auger-offline/config/databaseServers.xml`
- Module-config selects DB to use, e.g. `config/AAerosolSQLConfig.xml`:
`<databaseName> <PATH>/share/auger-offline/sqlite/Atm_Aerosol_1_A.sqlite
</databaseName>`
- For changing version, modify DB-server and module-config

DBs in Offline: DB hosts

Monitor of db-server status:

http://mon.auger.uni-wuppertal.de/db_mon/

(old script from Tom, not efficient, to be updated?)



Offline Database Monitor

This page shows the date and time of the last update of the Offline Master and Mirror databases.

Database.Table	BUW Master db-master.auger.uni-wuppertal.de	BUW Mirror db.auger.uni-wuppertal.de	KIT Mirror offline1.auger.org	UNAM Mirror db.auger.unam.mx	CUNY Mirror westeros.cgca.uwm.edu
AERA_3_A.RHardWareAssociation	2015-04-16 17:25:58	2015-04-16 17:25:58	2015-04-16 17:25:58	2015-04-16 08:25:58	
AERA_4_A.RHardWareAssociation	2018-05-04 13:02:37	2018-05-04 13:02:37	2018-03-02 16:48:28	2015-04-16 08:25:58	
Atm_Aerosol_1_A.aerosol	2017-02-02 14:52:53	2017-02-02 14:52:53	2017-02-02 14:52:53	2017-02-02 14:52:53	
Atm_Molecular_1_A.molecular	2018-09-29 03:04:11	2018-09-29 03:04:11	2018-09-29 03:04:11	2018-09-29 03:04:11	
Atm_Quality_0_A.overall_quality	2017-04-11 10:36:06	2017-04-11 10:36:06	2017-04-11 10:36:06	2017-04-11 10:36:06	
Atm_Cloud_1_A.cloud_pixel	2018-08-31 14:56:59	2018-08-31 14:56:59	2018-08-31 14:56:59	2018-08-31 14:56:59	
Atm_Lidar_1_A.lidar	2014-06-05 03:16:08	2014-06-05 03:16:08	2014-06-05 03:16:08	2014-06-05 03:16:08	
Atm_GOES_0_A.cloud_pixel	2015-04-01 16:13:07	2015-04-01 16:13:07	2015-04-01 16:13:07	2015-04-01 08:13:07	
FD_Calib_0_A.working_calib	2014-02-03 17:22:38	2014-02-03 17:22:38	2014-02-03 17:22:38	2014-02-03 10:22:38	
FD_Calib_1_A.working_calib	2015-12-18 19:00:00	2015-12-18 19:00:00	2015-12-18 19:00:00	2015-12-18 19:00:00	

Color Coding:

▫ green: in sync with master

▫ yellow: mirror currently out of sync with master, but mirror update is pending

▫ red: mirror out of sync with master, and no update of mirror has happened in over 24 hours

Note 1 : You cannot connect directly to the master database. Use one of the mirrors instead.

Note 2 : If a field is empty, then the corresponding database could not be contacted. It could be that the server is offline, or that there are too many connections to the given database. In any case, if the field for one mirror is empty, try another mirror.

[Notice: The status file for the page hasn't been updated for over 24 hours, some dates may be displayed with wrong colors.]

DBs in Offline

J. Rautenberg, BUW, 01.10.2018



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DBs in Offline: Issues

Reduce sqlite-conversions?

Combine dumps and sqlite-conversion?

DBCreatenSync for AERA not correct
entries modified/erased instead of last_modified additions)
this breaks jenkins when making a new local MySQL-DB

Large DB like Atm_Cloud_1_A might need versioning-break?

Unknown error for Atm_Cloud_1_A for sqlite

```
Now sqlite'ing Atm_Cloud_1_A ...  
Error: near line 221975197: database or disk is full  
Conversion completed without error. Output file: Atm_Cloud_1_A.sqlite
```

Any Detector-dependent information for SSD/sPMT?