Source ~2e12
sourceId, objectId, ...

Object ~20e9
objectId, ra,decl,flux,...

ForcedSource ~70e12
objectId, visitId, ...

MySQL + Xrootd
= distributed shared-nothing SQL for LSST

Daniel L. Wang

User —— proxy —— qserv-master —— xrootd —— qserv-ofs

mysql

mysql

Large Synoptic Survey Telescope

SLAC NATIONAL ACCELERATOR LABORATORY

(master)

mysql-proxy
MySQL (meta+results)
qserv-master
xrootd/cmsd mgr
xrootd/cmsd suprN

(worker)

xrootd/cmsd srvr
qserv-ofs-plugin
MySQL (chunks)
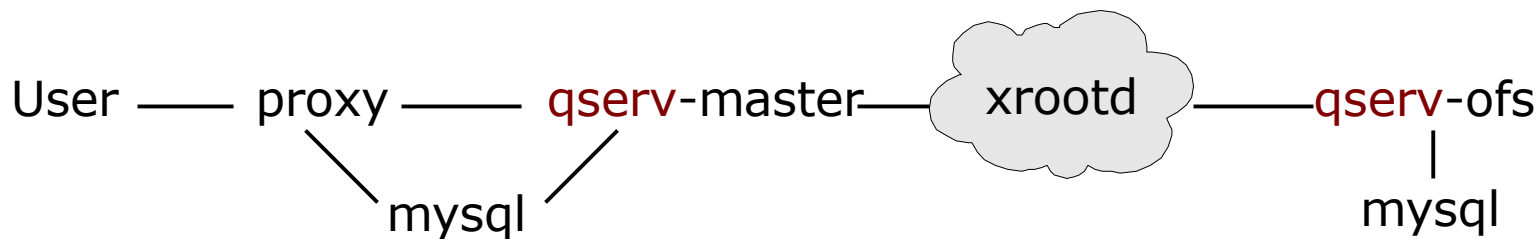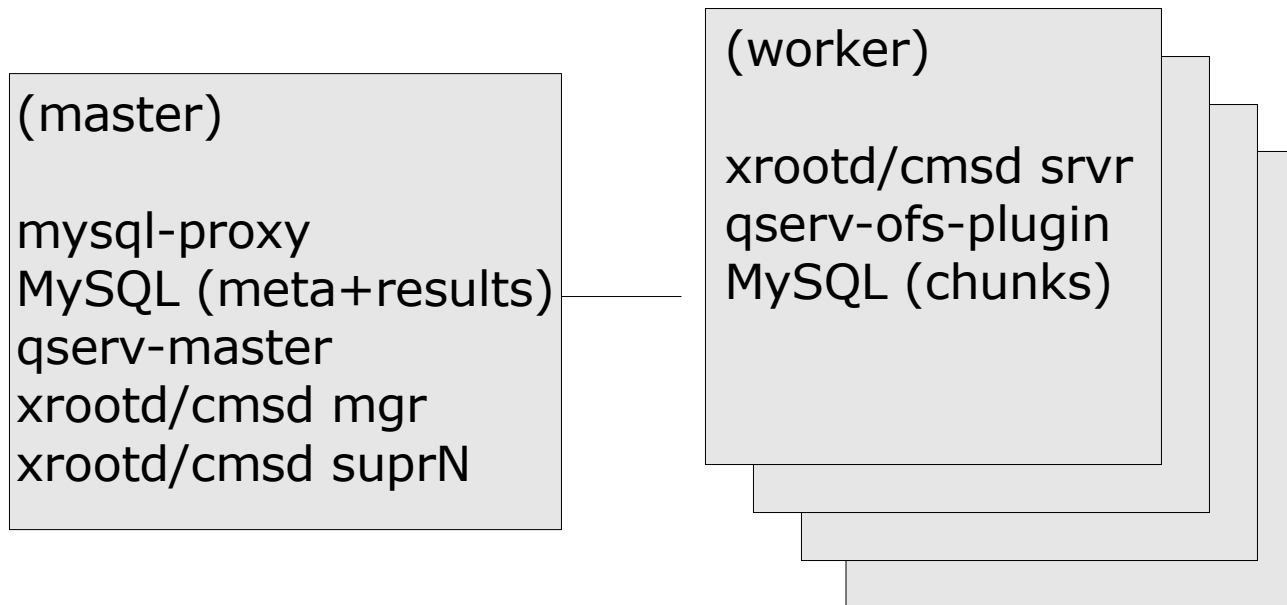
Dispatch:xroot://qsm@mgr:1094//query2/7505
Result:xroot://qsm@172.23.36.70:1094//result/10dbdd8da1a39908cd12b529fd79a7c4

Orig: select avg(flux) from Object
                      where area(10,10,20,20);

Chunk: select count(flux), sum(flux) from Object_NNNN
                      where area(10,10,20,20);

Aggr: select sum(sum_flux) / sum(count_flux) from temp_YYY;