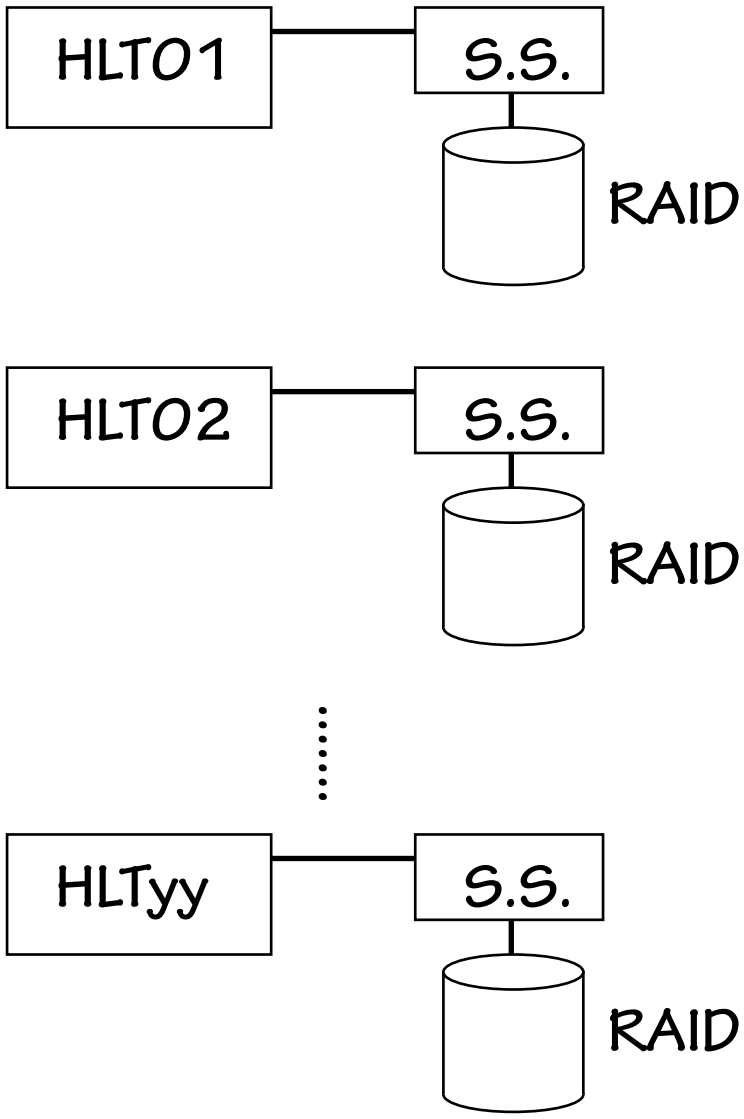
DQM is included in HLT
QAM is included in HLT

(DQM will be implemented as independent module from the main HLT process because the DQM may cause some trouble and stop the HLT. But it should not affect on HLT process)



expXXXXrunYYYY.dst-00-HLT01
expXXXXrunYYYY.dst-01-HLT01
expXXXXrunYYYY.dst-02-HLT01
⋮
expXXXXrunYYYY.dst-zz-HLT01

expXXXXrunYYYY.dst-00-HLT02
expXXXXrunYYYY.dst-01-HLT02
expXXXXrunYYYY.dst-02-HLT02

expXXXXrunYYYY.dst-zz-HLT02

expXXXXrunYYYY.dst-00-HLTyy
expXXXXrunYYYY.dst-01-HLTyy
expXXXXrunYYYY.dst-02-HLTyy

expXXXXrunYYYY.dst-zz-HLTyy

LT05

140MB/s

how to check ?

(HLT creates not only rawdata but also log files and histograms. These files also have to be transfered from online RAID to offline storage)

2GB?, 4GB/file
how many files ?

DAQ likes to keep 8-hour limit

(Once DAQ start, DAQ group does not like to stop the data taking. Because many troubles will happen in the start run process.)

copy starts after each run
RAID can keep 1-2 weeks data

300kB/event + 6kHz = 1.8GB/s

8 hours run = 51.84TB

How long can we take time to copy the data from online to offline ?

is it possible to make the run short ?

is it possible to start copying after each sub-file is created ?

(To make the traffic moderate)

expXXXXrunYYYY.dst-00-HLT01

expXXXXrunYYYY.dst-01-HLT01

expXXXXrunYYYY.dst-02-HLT01

⋮

expXXXXrunYYYY.dst-zz-HLT01

expXXXXrunYYYY.dst-00-HLT02

expXXXXrunYYYY.dst-01-HLT02

expXXXXrunYYYY.dst-02-HLT02

expXXXXrunYYYY.dst-zz-HLT02

expXXXXrunYYYY.dst-00-HLTyy

expXXXXrunYYYY.dst-01-HLTyy

expXXXXrunYYYY.dst-02-HLTyy

expXXXXrunYYYY.dst-zz-HLTyy

LT05

140MB/s

how to check ?

(HLT creates not only rawdata but also log files and histograms. These files also have to be transfered from online RAID to offline storage)

2GB?, 4GB/file

how many files ?

DAQ likes to keep 8-hour limit

(Once DAQ start, DAQ group does not like to stop the data taking. Because many troubles will happen in the start run process.)

copy starts after each run

RAID can keep 1-2 weeks data

Optical fibers from the Tsukuba exp. hall to KEK-CRC

Now we have 6 single mode(?) fibers from Tsukuba B3 to KEK-CRC
Nobody remebers the path (3km ?)
10 years (or more ?) has passed since those were laid

According to the cabling company (NetOne)

The lifetime of optical cable is 20 years
To check the 3km long path costs 200-300 man-yen (=30 $_{\text{thousand}}$ USD)
(including cable quality test)

To lay the new 3km long cable costs 200-300 man-yen (=30 $_{\text{thousand}}$ USD)
(not including cable cost)

The cost of the 3km long cable = 20 man-yen/cable (=2.4 $_{\text{thousand}}$ USD)

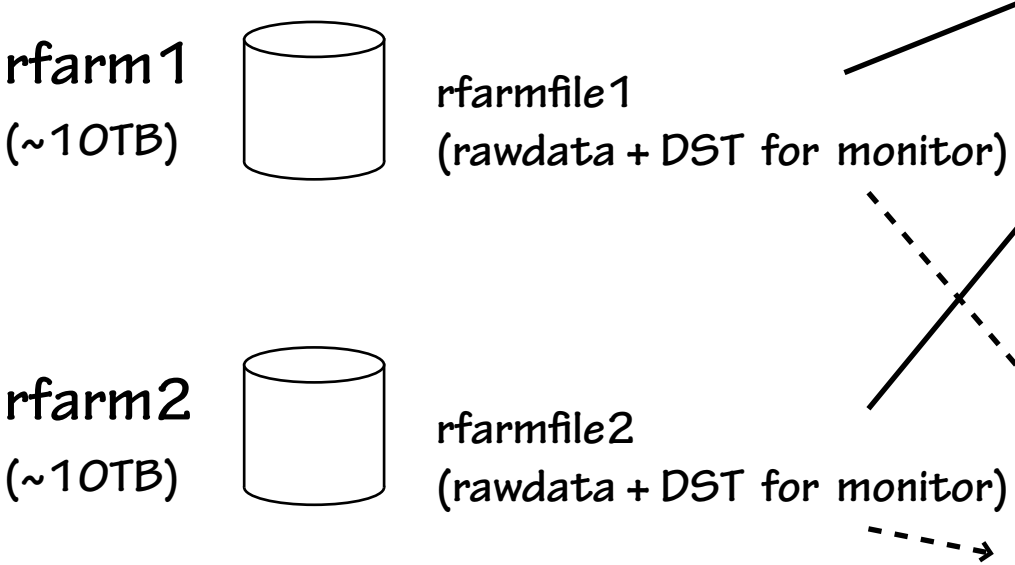
How many cables we need.

(DQM will be implemented as independent module from the main HLT process
because the DQM may cause some trouble and stop the HLT. But it should not affect on HLT process)

the spool disks on rfarm1 and rfarm2 are mounted to b-computer
gOdst can access them from b-computers

a special module "rawread" which is submitted on b-computer can read these data through zfserv and extract the raw data part only from rfarmfile1 and rfarmfile2, then it mearges these two raw data parts and save the "usual" raw data on the b-computer

rfarmfile1
typical size (for 8-hours run) ?



In the rfarm spool disk, there are special directories.
When the file gets ready to be copied from rfarm to offline, a file in which the copiable run's name is written.
By checking this directory peoriodically (in Belle, a basf job is submitted to check this directory periodically) with using "at" command or crontab (or basf jobs), we can know which run gets ready to be copied.

usually, how long does it take
to cpoy all rfarmfiles of the 8-hours run ?

a special module "???" which is submitted on b-computer can read these data through zfserv and extract the DST part only from rfarmfile1 and rfarmfile2, then it mearges these two DST parts and save the "usual" DST file for monitoring on the b-computer

in exp71, because of the rfarm spool disk troubles, we could not keep the rfarmfiles more than a couple of days (usually, it can keep 1-2 weeks). Therefore, rfarmfiles were "scp"ed to afarm HSM system first, then these files are processed with "rawread".