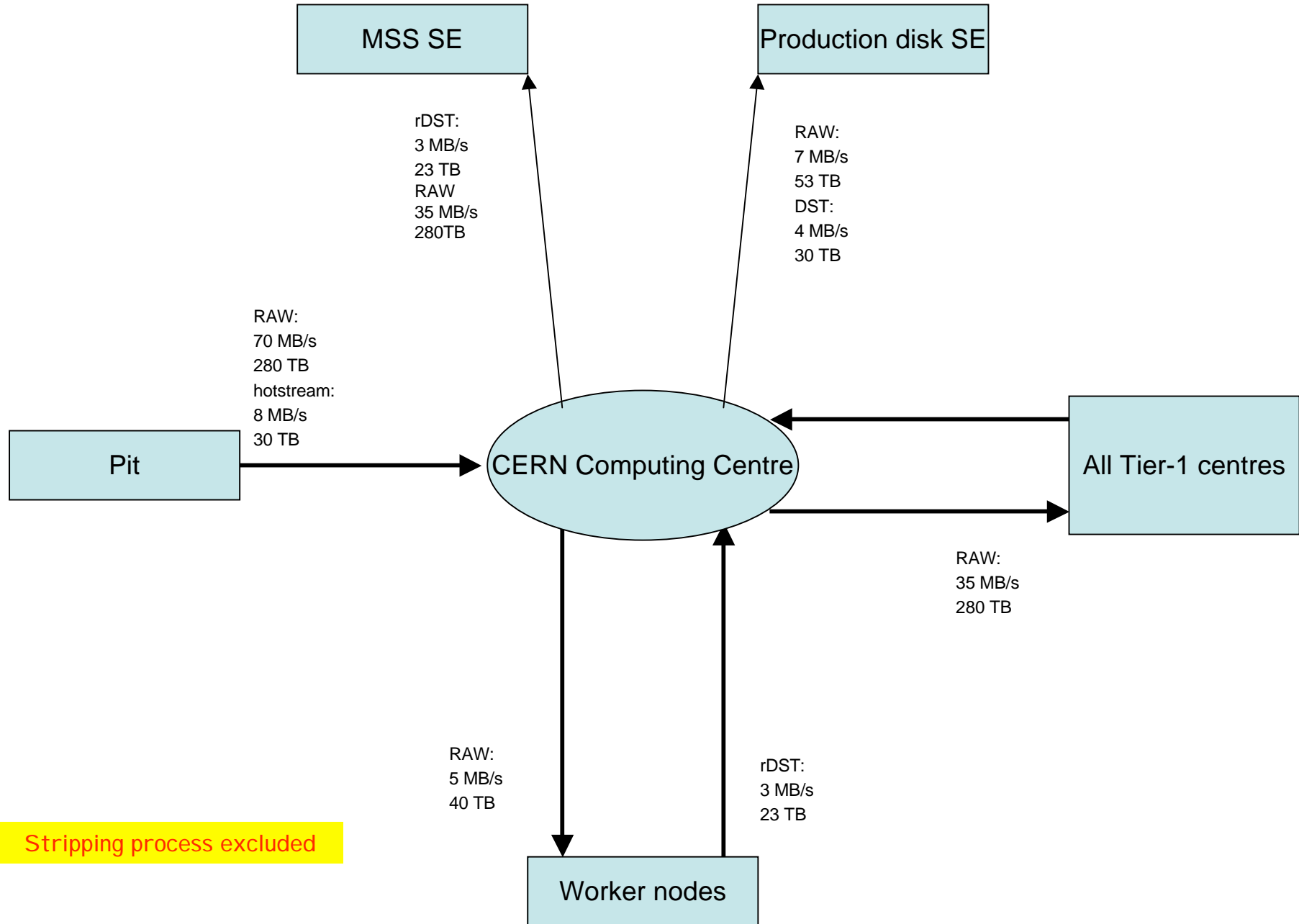


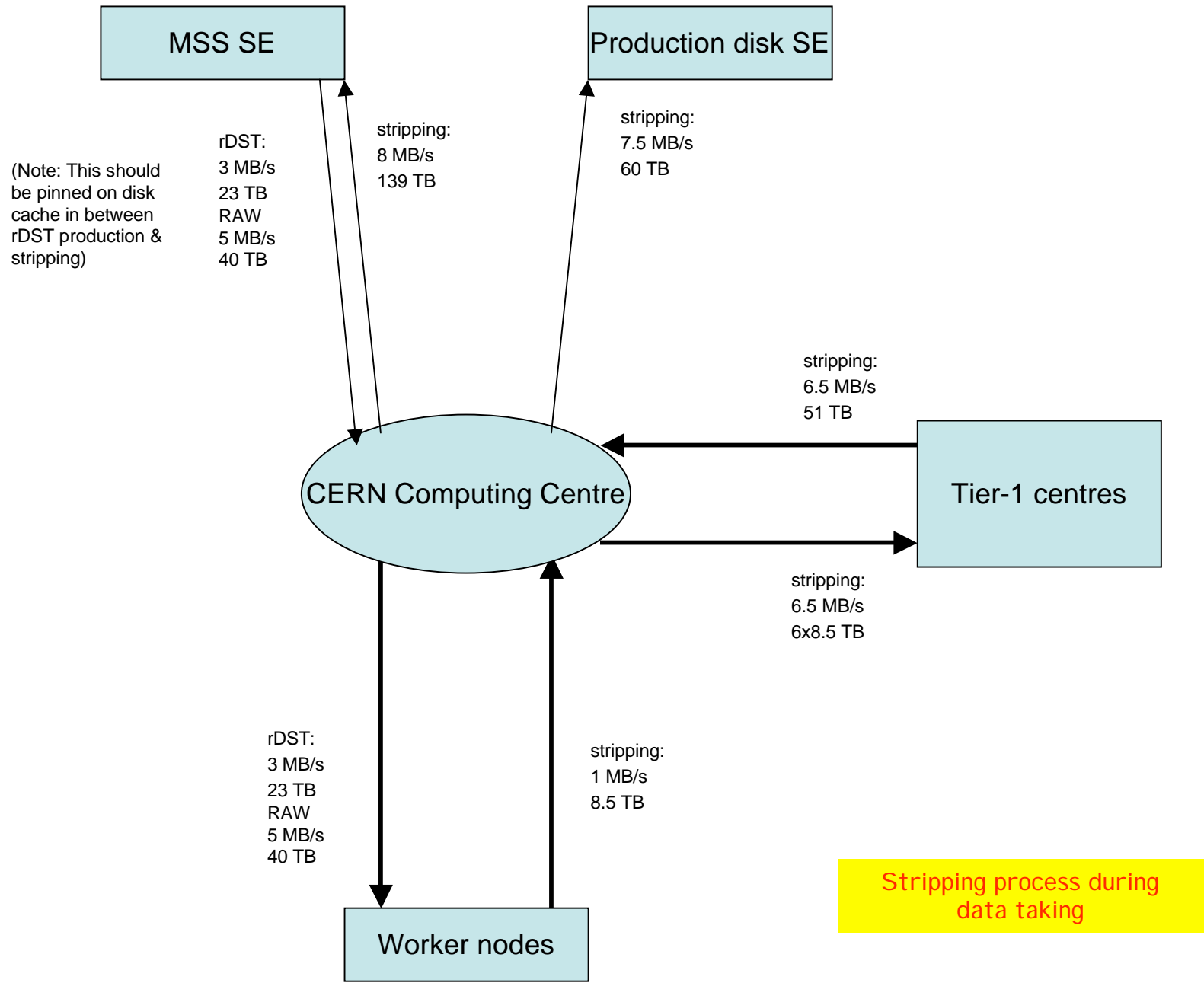
LHCb Computing Model - A Pictorial Guide 2008



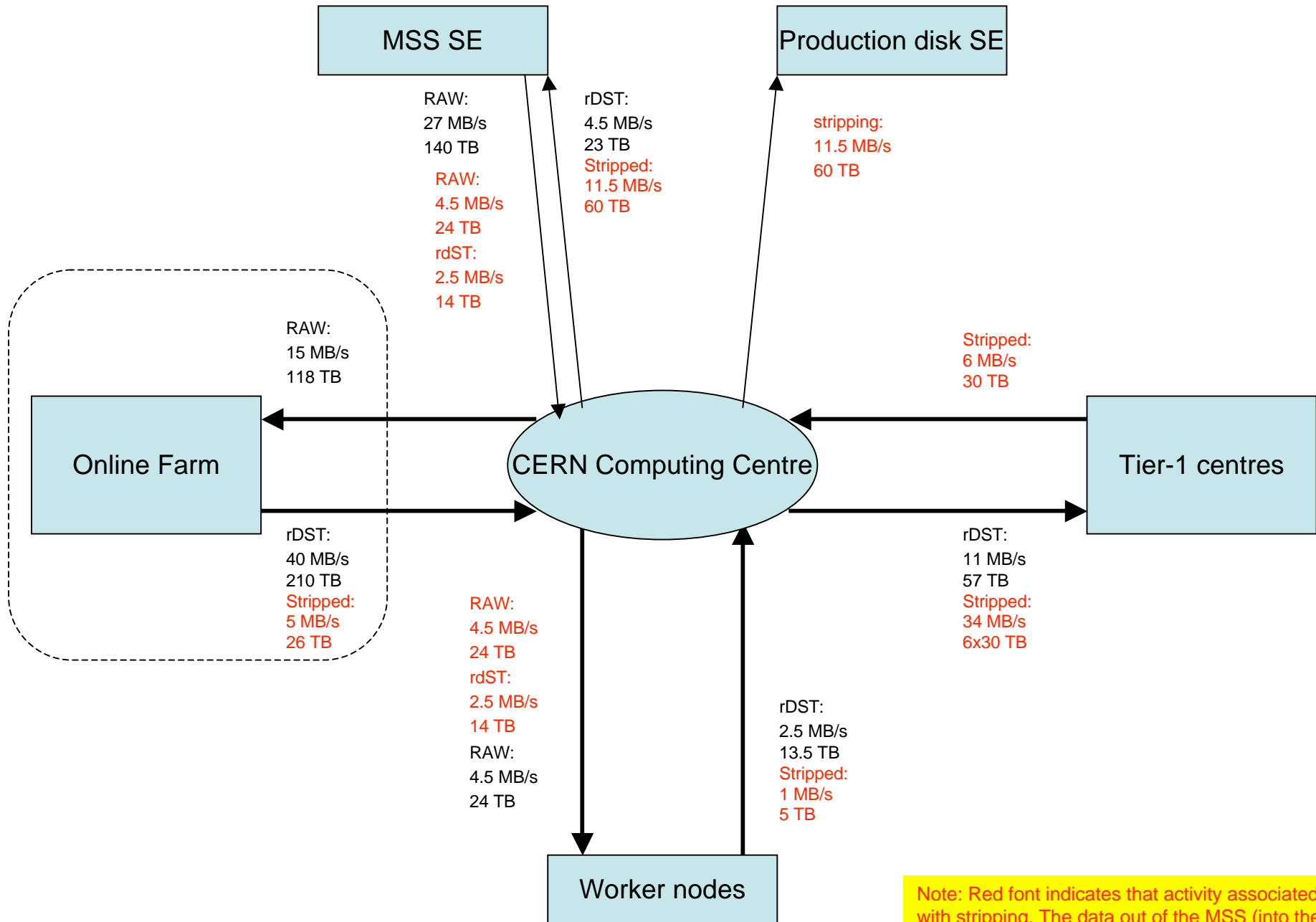
CERN Data taking



Stripping process excluded



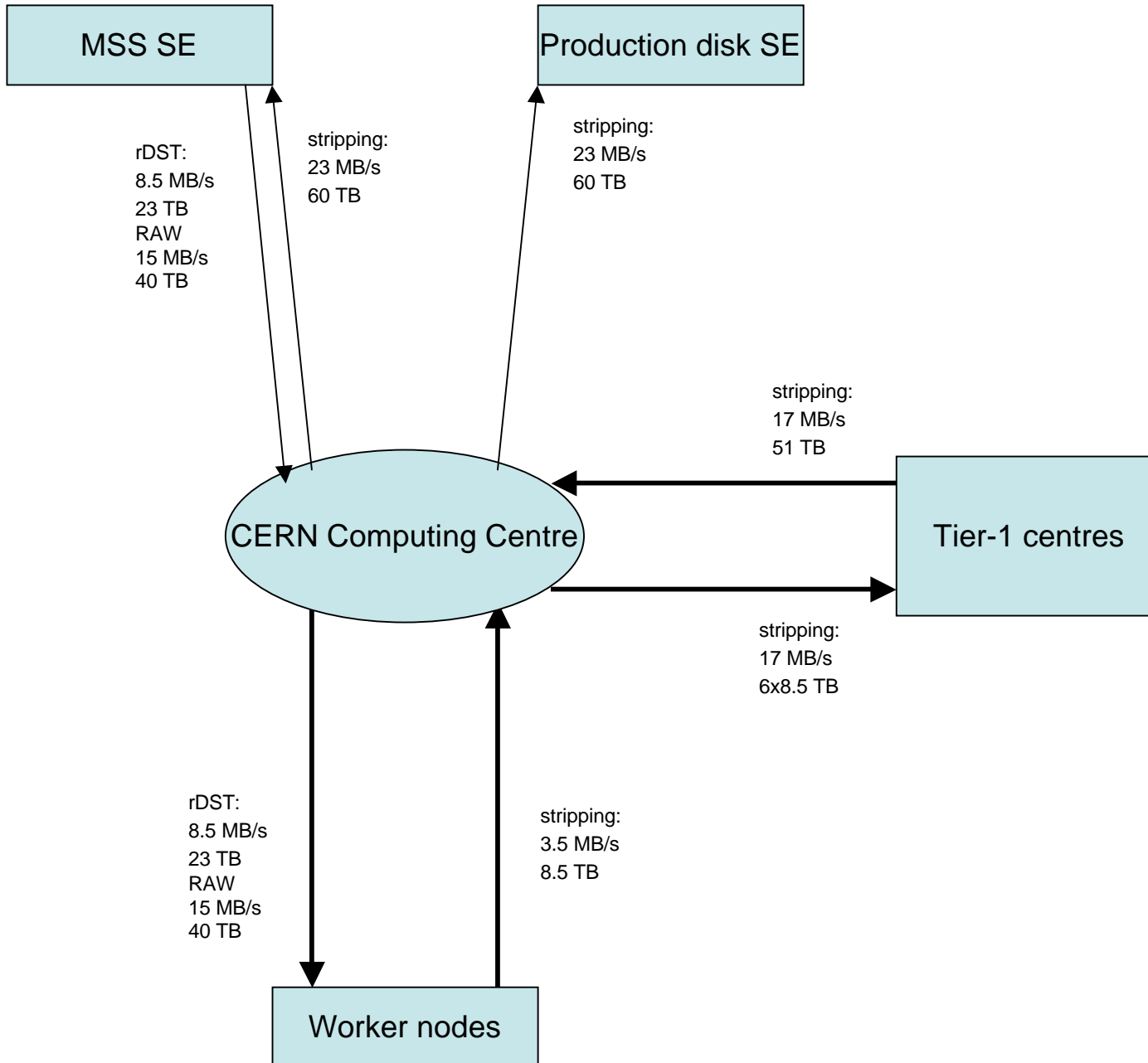
CERN Reprocessing (2 months)



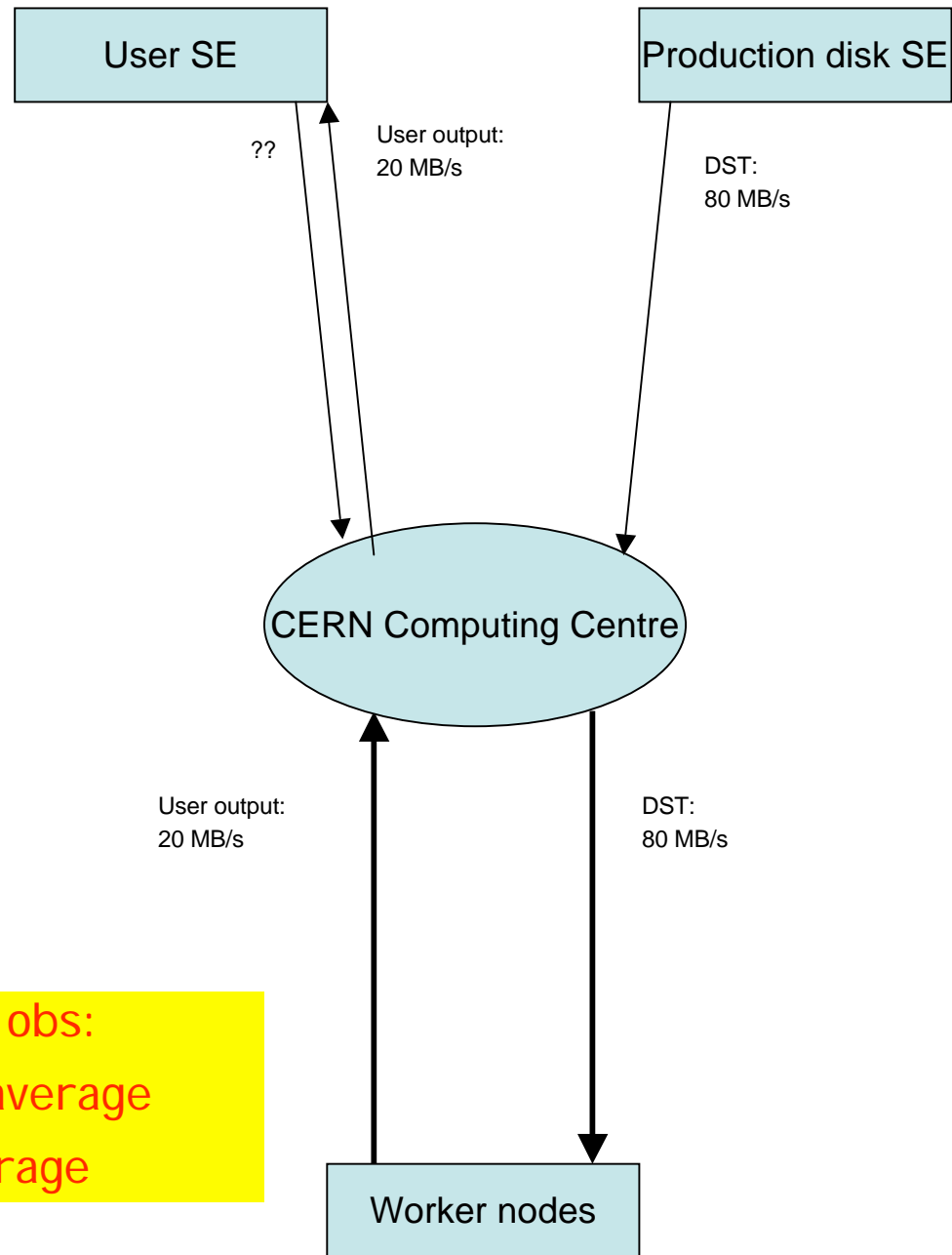
Note: Red font indicates that activity associated with stripping. The data out of the MSS (into the worker nodes) is assumed to be pinned on the disk cache from the reconstruction until stripped

CERN Stripping

(1 month - twice a year)

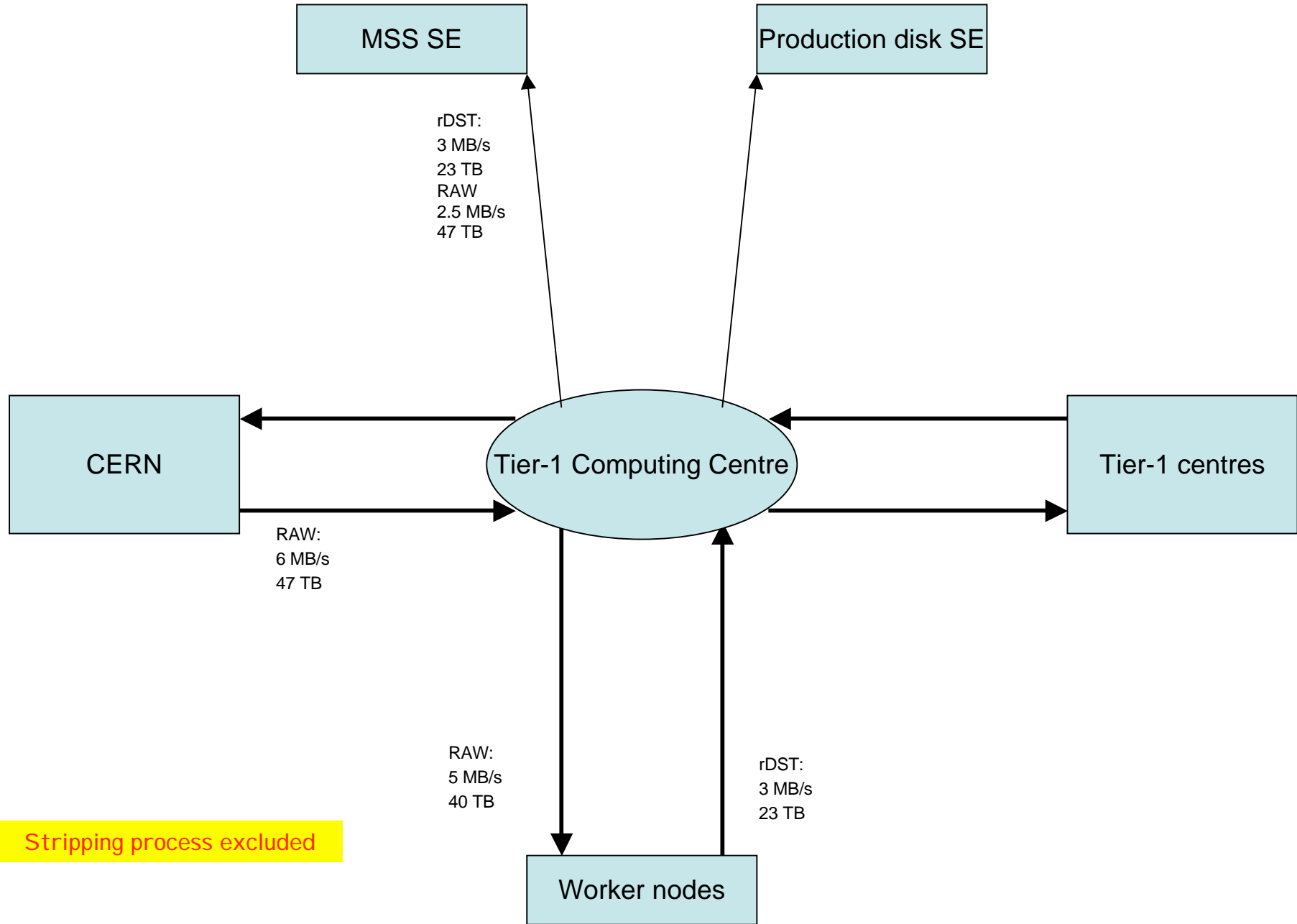


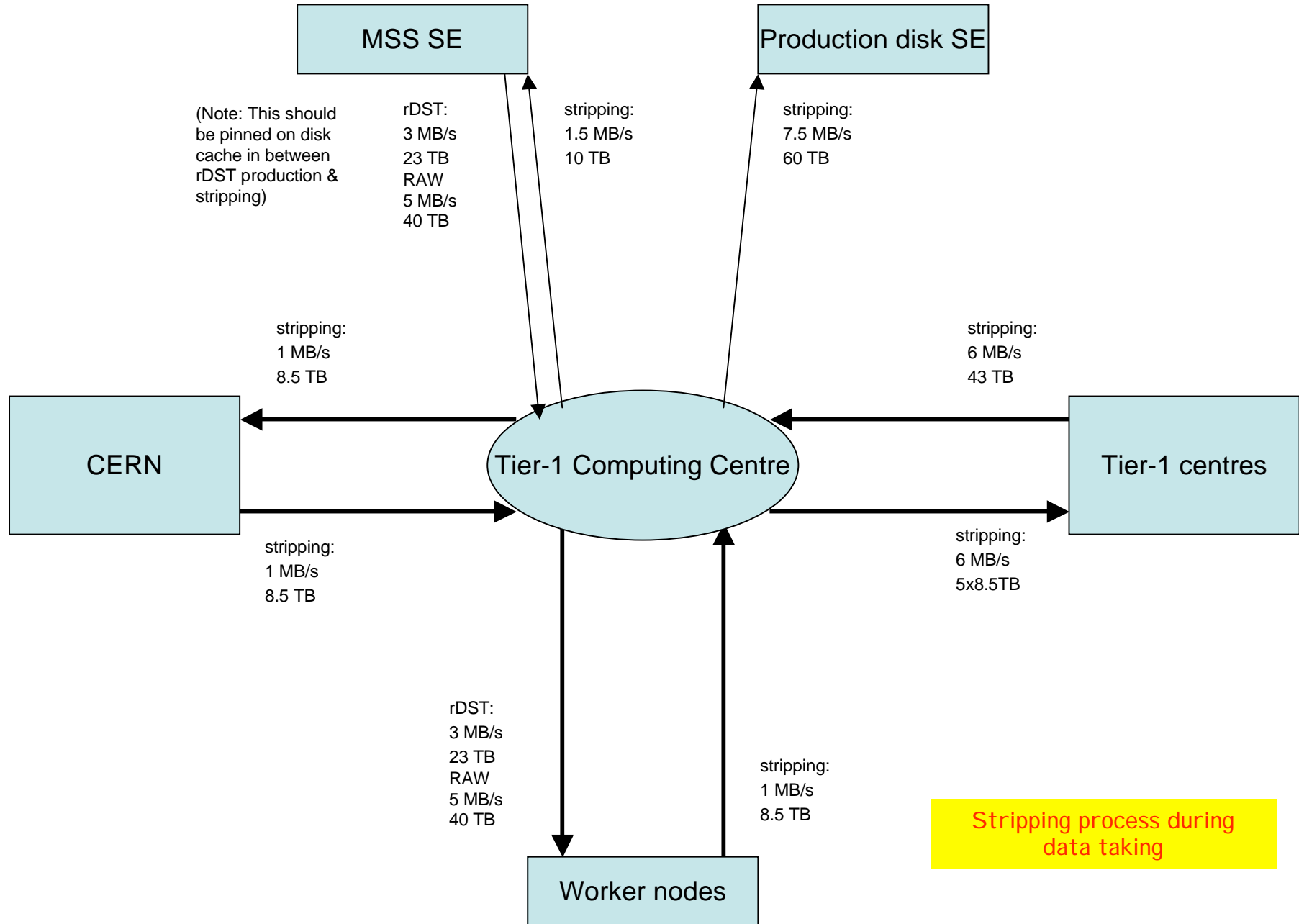
CERN Analysis



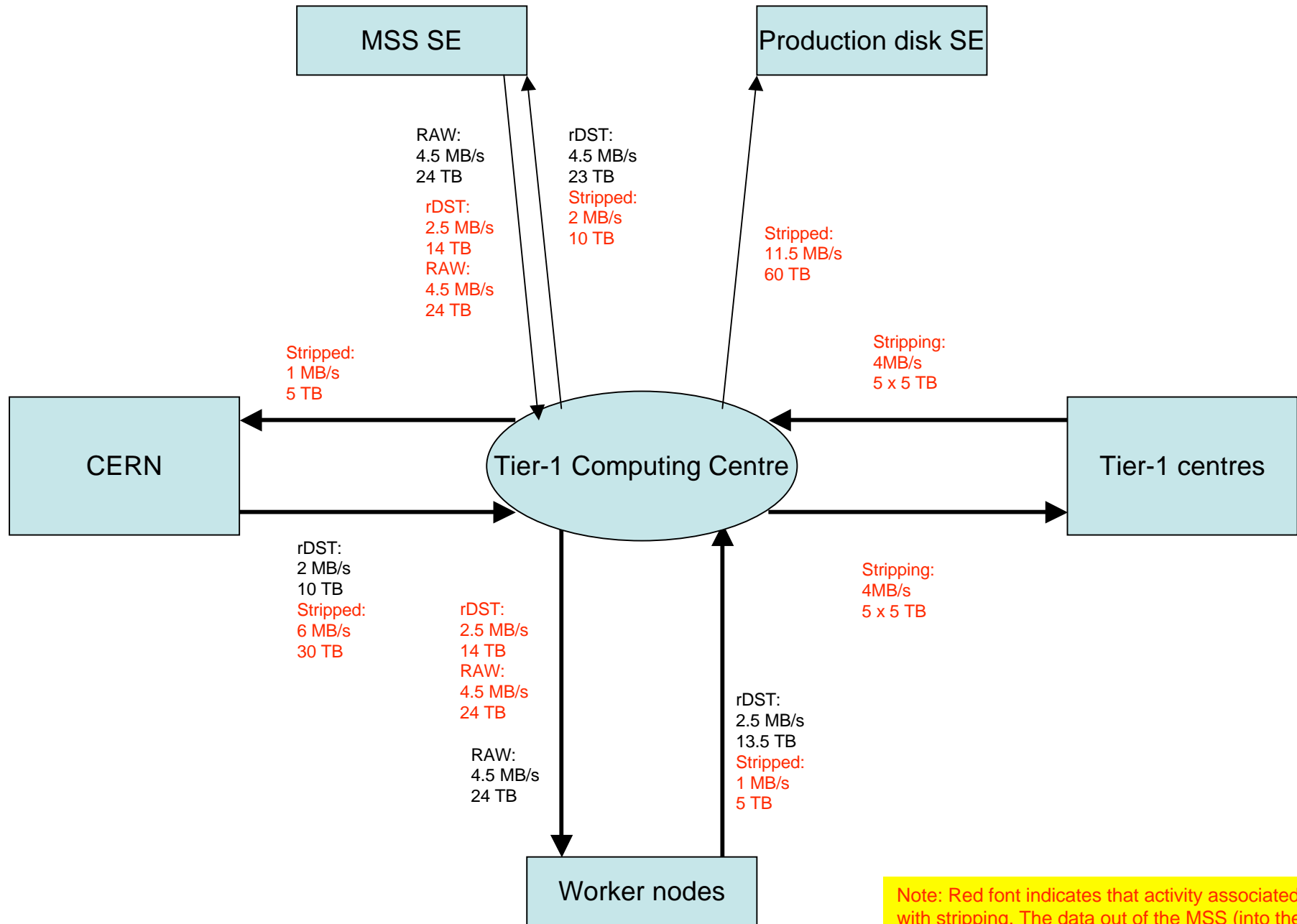
~35 concurrent jobs:
2.3 MB/s input on average
0.6 MB/s on average

“Typical” Tier-1 Data taking



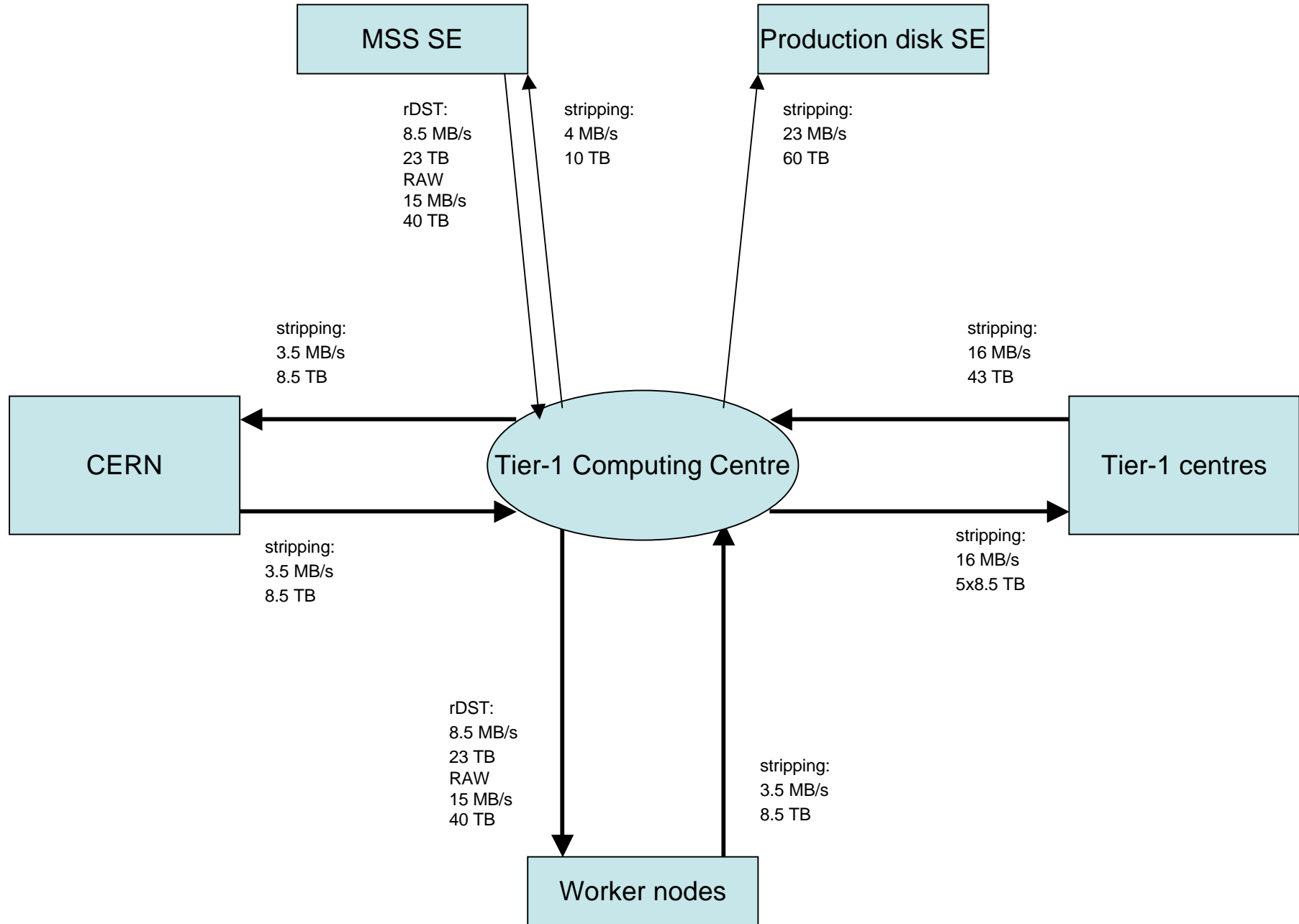


“Typical” Tier-1 Reprocessing (2-months)

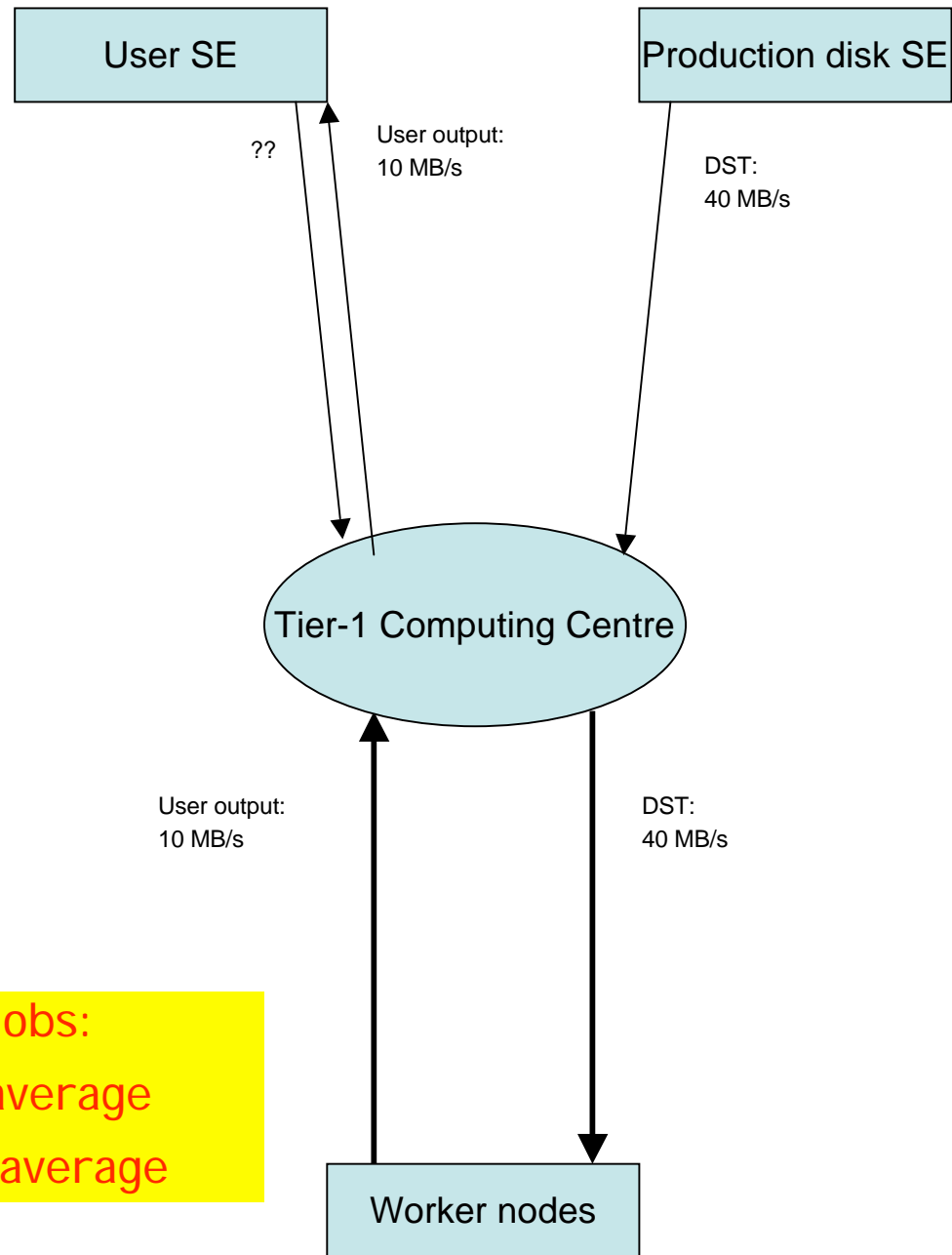


Note: Red font indicates that activity associated with stripping. The data out of the MSS (into the worker nodes) is assumed to be pinned on the disk cache from the reconstruction until stripped

**“Typical” Tier-1 Stripping
(1 month - twice a year)**



“Typical” Tier-1 Analysis



~18 concurrent jobs:
2.3 MB/s input on average
0.6 MB/s output on average

	Typical	GridKa	IN2P3	CNAF	SaRA	RAL	PIC	
Reprocessing								
rDST from CERN (TB)	9.5	8.6	15.4	8.0	13.1	8.6	4.0	
rate (MB/s)	1.8	1.6	2.9	1.5	2.5	1.6	0.8	
Stripping from CERN	34.0	34.0	34.0	34.0	34.0	34.0	34.0	
rate	6.5	6.5	6.5	6.5	6.5	6.5	6.5	
RAW to WN	24.0	21.6	38.9	20.2	33.1	21.6	10.1	
rate	4.6	4.1	7.4	3.8	6.3	4.1	1.9	
Strip: RAW to WN	24.0	21.6	38.9	20.2	33.1	21.6	10.1	
rate	4.6	4.1	7.4	3.8	6.3	4.1	1.9	
Strip: rDST to WN	13.5	12.2	21.9	11.3	18.6	12.2	5.7	
rate	2.6	2.3	4.2	2.2	3.5	2.3	1.1	
rDST from WN	13.5	12.2	21.9	11.3	18.6	12.2	5.7	
rate	2.6	2.3	4.2	2.2	3.5	2.3	1.1	
Strip: DST out of WN	5.0	4.5	8.1	4.2	6.9	4.5	2.1	
rate	1.0	0.9	1.5	0.8	1.3	0.9	0.4	
Strip: DST to other T1	25.0	22.5	40.5	21.0	34.5	22.5	10.5	
rate	4.8	4.3	7.7	4.0	6.6	4.3	2.0	
Strip: DST from other T1	25.0	25.5	21.9	25.8	23.1	25.5	27.9	
rate	4.8	4.9	4.2	4.9	4.4	4.9	5.3	
Strip: DST to prod disk SE	60.0	60.0	60.0	60.0	60.0	60.0	60.0	
rate	11.4	11.4	11.4	11.4	11.4	11.4	11.4	
rDST to MSS	23.0	20.7	37.3	19.3	31.7	20.7	9.7	
rate	4.4	3.9	7.1	3.7	6.0	3.9	1.8	
Strip: DST to MSS	10.0	9.0	16.2	8.4	13.8	9.0	4.2	
rate	1.9	1.7	3.1	1.6	2.6	1.7	0.8	
RAW out pf MSS	24.0	21.6	38.9	20.2	33.1	21.6	10.1	
rate	4.6	4.1	7.4	3.8	6.3	4.1	1.9	
Strip: RAW out of MSS	24.0	21.6	38.9	20.2	33.1	21.6	10.1	
rate	4.6	4.1	7.4	3.8	6.3	4.1	1.9	
Strip: rDST out of MSS	13.5	12.2	21.9	11.3	18.6	12.2	5.7	
rate	2.6	2.3	4.2	2.2	3.5	2.3	1.1	
Strip: DST to CERN	5.0	4.5	8.1	4.2	6.9	4.5	2.1	
rate	1.0	0.9	1.5	0.8	1.3	0.9	0.4	

	Typical	GridKa	IN2P3	CNAF	SaRA	RAL	PIC	
Stripping								
RAW into WN (out of MSS) (TB)	40.0	36.0	64.8	33.6	55.2	36.0	16.8	
rate (MB/s)	15.2	13.7	24.7	12.8	21.0	13.7	6.4	
rDST into WN (out of MSS)	23.0	20.7	37.3	19.3	31.7	20.7	9.7	
rate	8.8	7.9	14.2	7.4	12.1	7.9	3.7	
DST out of WN	8.5	7.7	13.8	7.1	11.7	7.7	3.6	
rate	3.2	2.9	5.2	2.7	4.5	2.9	1.4	
DST out to T1	42.5	38.3	68.9	35.7	58.7	38.3	17.9	
rate	16.2	14.6	26.2	13.6	22.3	14.6	6.8	
DST in from T1	42.5	43.4	37.2	43.9	39.3	43.4	47.4	
rate	16.2	16.5	14.2	16.7	14.9	16.5	18.0	
DST to prod disk SE	60.0	60.0	60.0	60.0	60.0	60.0	60.0	
rate	22.8	22.8	22.8	22.8	22.8	22.8	22.8	
DST to MSS	10.0	9.0	16.2	8.4	13.8	9.0	4.2	
rate	3.8	3.4	6.2	3.2	5.3	3.4	1.6	
DST to CERN	8.6	7.7	13.9	7.2	11.8	7.7	3.6	
rate	3.3	2.9	5.3	2.7	4.5	2.9	1.4	
DST in from CERN	8.5	8.5	8.5	8.5	8.5	8.5	8.5	
rate	3.2	3.2	3.2	3.2	3.2	3.2	3.2	
Analysis								
rate: out of production disk SE	40.0	36.0	64.8	33.6	55.2	36.0	16.8	
rate: into WN	40.0	36.0	64.8	33.6	55.2	36.0	16.8	
rate: out of WN	10.0	9.0	16.2	8.4	13.8	9.0	4.2	
rate: to user disk SE	10.0	9.0	16.2	8.4	13.8	9.0	4.2	