

LHCb Computing Operations and Plans

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WLCG Operations Coordination

- Since last meeting smooth operations
 - First pass reconstruction at CERN + 5 “attached T2 sites”
 - Only parts of data are reconstructed mainly for DQ
 - Fast turnaround
 - Reprocessing of 2012 collected data
 - Approaching the first pass processing
 - Activity has been throttled in order to allow more Simulation jobs to be executed
 - ~ 8 and 10k reconstruction jobs running in parallel

- During reprocessing some shortages seen
 - Very constructive meeting with GRIDKA beginning of November
- Table with expected peak loads (unit MB/s)

Bandwidth	# of weeks		CERN	CNAF	GRIDKA	IN2P3	PIC	RAL	SARA
To tape	12	RAW data	110	25	22	22	6	17	18
	12	Prompt	107	4	4	0	0	4	4
	7	Repro 2012	10	120	106	96	28	83	89
		Max 2012	228	152	135	121	35	106	113
	5	Repro 2012-2	10	123	109	99	29	85	91
	5	Repro 2011	134	75	73	86	27	68	83
From Tape	12	Prompt	110	0	0	0	0	0	0
	7	Repro 2012	0	59	51	51	15	39	42
		Max 2012	110	60	53	53	15	40	43
	5	Repro 2012-2	0	60	53	53	15	40	43
	5	Repro 2011	66	35	34	46	15	31	39
From Tape	8	Restripping 2012	0	167	146	146	43	112	120

- “Repro 2012-2” and “Repro 2011” and “Restripping 2012” will happen in 2013
- Table will also be provided as input for next requests

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Activity	Approx Time + Duration
2012 data reprocessing	Sep '12 – Jan '13
2011 data reprocessing	Beginning '13 (~ 1 ½ months)
Incremental stripping	~ 2 x / year in 2013 (~ 2 months)
2011/12 data reprocessing	During 2014 (~ 5 months)

Loads on sites storage systems

- **Reprocessing: Reconstruction + Stripping + Merging**
 - Reconstruction run on “attached T2 sites”
 - Staging all RAW data from tape (via BUFFER)
 - Reco output (FULL.DST) migrated to tape
 - Replication of Merging output (DST) on multiple sites
- **Incremental Stripping: Stripping + Merging**
 - Staging of all FULL.DST files
 - Producing partially (incremental) or all physics (full) DST files
 - Replication of DST on multiple sites