

Updated ALICE Computing Resources Requirements

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The requirements for computing resources have been revised upon the request of the WLCG project leader. The updated requirements take into account the LHC startup scenario in 2007 and 2008 as announced by the CERN management and summarized in Tab. 1. 2009 is assumed to be the first standard year of data taking.

Tab. 1: *Running scenario*

year	Run time for physics (seconds)	
	pp	PbPb
2007	6×10^5	0
2008	4×10^6	4×10^5
2009	1×10^7	1×10^6

The updated CPU, disk and permanent storage resources required by the ALICE Computing Model, reviewed and approved by the LHCC, are summarized in Tab. 2-5 for the years 2007-2009. Resources are split in the CERN Tier0 and Tier1, the CERN CAF and the external Tier1s and Tier2s.

Tab. 2: *Computing resources required in 2007, new and old data*

New 2007	CERN				External			Total
	Tier0	CAF	Tier1	Total	Tier1s	Tier2s	Total	
CPU(MSI2K)	0.053	0.026	0.90	0.90	3.03	4.17	7.19	8.09
DISK(PB)	0.014	0.0029	0.34	0.36	2.01	0.98	2.99	3.35
MS (PB/year)	0.066	-	0.33	0.39	1.97	-	1.97	2.37

Old 2007	CERN				External			Total
	Tier0	CAF	Tier1	Total	Tier1s	Tier2s	Total	
CPU(MSI2K)	2.49	0.36	1.44	3.32	5.15	5.76	10.91	14.23
				-73%	-41%	-28%	-34%	-43%
DISK(PB)	0.095	0.12	0.48	0.70	2.98	1.40	4.38	5.08
	-85%	-98%	-26%	-49%	-32%	-30%	-32%	-35%
MS (PB/year)	0.99	-	0.46	1.45	2.77	-	2.77	4.23
	-93%	-	-28%	-73%	-29%	-	-29%	-44%

Tab. 3: Computing resources required in 2008, new and old data

New 2008	CERN				External			Total
	Tier0	CAF	Tier1	Total	Tier1s	Tier2s	Total	
CPU(MSI2K)	3.31	1.04	2.90	7.25	10.23	9.63	19.86	27.11
DISK(PB)	0.095	0.11	0.85	1.06	5.22	2.46	7.68	8.74
MS (PB/year)	0.99	-	0.84	1.83	5.06	-	5.06	6.90

Old 2008	CERN				External			Total
	Tier0	CAF	Tier1	Total	Tier1s	Tier2s	Total	
CPU(MSI2K)	8.29	0.92	3.68	8.30	12.88	14.41	27.29	35.59
				-13%	-21%	-33%	-27%	-24%
DISK(PB)	0.24	0.30	1.21	1.75	7.45	3.51	10.96	12.71
	-60%	-63%	-30%	-40%	-30%	-30%	-29%	-31%
MS (PB/year)	2.48	-	1.16	3.64	6.95	-	6.95	10.59
	-93%	-	-28%	-73%	-32%	-	-32%	-35%

Tab. 4: Computing resources required in 2009, new and old data

New 2009	CERN				External			Total
	Tier0	CAF	Tier1	Total	Tier1s	Tier2s	Total	
CPU(MSI2K)	8.29	2.61	4.60	8.94	18.43	15.97	34.40	45.30
DISK(PB)	0.24	0.27	1.32	1.83	7.94	3.78	11.71	13.54
MS (PB/year)	2.48	-	1.16	3.63	6.95	-	6.95	10.58

Old 2009	CERN				External			Total
	Tier0	CAF	Tier1	Total	Tier1s	Tier2s	Total	
CPU(MSI2K)	8.29	1.20	4.80	10.77	16.75	18.73	35.48	46.25
				-16%	+10%	-14%	-3%	-2%
DISK(PB)	0.31	0.39	1.57	2.27	10.11	5.26	15.37	17.72
	-23%	-31%	-16%	-19%	-21%	-28%	-6%	-24%
MS (PB/year)	3.22	-	1.51	4.73	9.03	-	9.03	13.76
	-23%	-	-28%	-13%	-32%	-	-32%	-23%

Tab. 4: *Computing resources required in 2010, new data*

New 2010	CERN				External			Total
	Tier0	CAF	Tier1	Total	Tier1s	Tier2s	Total	
CPU(MSI2K)	8.29	2.61	7.94	8.94	22.93	20.76	43.69	54.6
DISK(PB)	0.24	0.27	3.75	4.26	9.87	4.91	14.78	19.0
MS (PB/year)	2.48	-	1.16	3.63	6.95	-	6.95	10.58