

Storage

Dcache ZN	Dcache ZN	Group	Total	Atlas	AtlasLocal	icecube	CTA	Parallel	Pitz	LHCb	Theorie	RZ	Frei
EndOfWarrenty	Storage TB		7317	1992	589	2262	1546	50	120	0	157	602	17
2010-03-07	Ersetzt: zyklop22-24	rz	0										
2011-03-11	Ersetzt: muna pear	pitz	0										
2011-08-21	Aus: ssu08-11	LHCb	0										
2011-10-29	Ersetzt: ssu12-13 – frei/write obst66/67	rz-write	0										
2011-12-10	ssu18-30	Atlas	0										
2011-12-11	Ssu14-17 -> Lustre	Icecube User	0										
2012-07-23	Ersetzt: Tango1-3	Parallel	0										
2012-07-23	tango4	Rz/Parallel	0										
2012-07-23	Ersetzt asteria	rz-write	0										
2012-07-23	Ersetzt: omal pear (TEST)	test	0										
2012-11-05	Aus: ssu31-32	LHCb	0										
2012-11-11	Ssu33-35	Atlas	0										
2012-11-20	Ssu36-39/41-42	Atlas	0										
2012-12-01	ssu43-44	icecube Tape	0										
2013-01-09	tango5,7	Parallel	0										
2013-03-15	obst00-01	Icecube Tape	0										
2013-08-09	obst02-05	LHCb	0										
2013-08-20	Obst06-11	icecube Tape	0										
2014-01-10	Obst23-27	CTA	0										
2014-01-10	Obst28-29	RZ	0										
2014-02-28	Ersetzt: Obst30-35	Atlas	0	0									
2014-02-28	Obst36-39	Atlas	0										
2014-09-15	Ersetzt: Obst40-42	Atlas	0										
2014-09-15	Obst43-45,obst50-53	Atlas	0										
2014-11-09	Obst46-49	Icecube Tape/T1	0										
2015-02-25	Obst54-55	Atlas	0										
2015-02-25	Obst56-61	Atlas	0										
2015-03-13	Obst62-65	cta	0										
2017-07-19	Pear05-07	Atlas	0										
2015-06-18	pear00+hobd	rz/pitz/parallel	0										
2016-05-17	Obst66-67	rz-write	0										
2016-06-14	Obst69-75	Atlas	0										
2016-06-14	Obst76-83	icecube Tape/T1	0										
2017-05-18	pear01	icecube Tape/T1	0										
2017-05-18	Pear02-04	icecube Tape/T1	0										
2017-07-19	Pear08	Atlas	0										
2017-07-19	Pear10-12	Atlas	0										
2017-08-30	Pear13-15	CTA	117				117187829760						
2018-02-14	Pear16	ATLAS	0										
2018-02-14	Pear17-21	ATLAS	195	39062609920	156250439680								
2018-06-10	Pear22-26	Icecube	195			195313049600							
2018-09-09	Pear27	Theorie	39								39062609920		
2018-07-11	Pear28-33	ATLAS	234	39062609920	195313049600								
2018-11-27	plum00	rz/parallel/pitz	0										
2019-02-19	Plum01-04	Icecube-rw	234			234190323192							
2019-02-19	Plum05-06	nic/allgemein	117			117095161596							
2019-02-19	plum07	Rz-write	59									58547580798	
2019-08-11	Plum08-12	CTA	293				292737903990						
2020-04-01	Plum13-14	CTA	117				117095161596						
2020-04-01	Plum15-16	DV	117									117095161596	
2020-04-01	Plum17-18	Icecube	117			117095161596							
2020-04-01	Plum19-31	ATLAS	761	644023388778	117095161596								
2020-04-01	Plum32-33	DV	156									156157661596	
2020-07-18	Plum34-37	icecube Tape/T1	320			319600000000							
2020-12-01	Plum38-40	icecube	240			239700000000							
2020-11-28	Plum41-43	Atlas	240	239700000000									
2020-12-04	Plum44-47	CTA	320				319600000000						
2021-04-06	Plum48-49	Atlas	191	191329484800									
2021-05-30	Plum50-51	icecube	200			199800000000							
2021-05-30	Plum52-58	CTA	699				699300000000						
2013-03-23	Peach01-02	icecube	240			239800000000							
2023-03-23	Peach03-05	Atlas	360	359700000000									

Storage

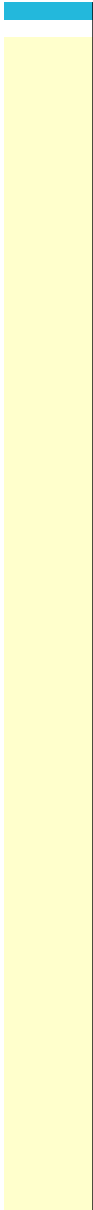
2023-04-11	Peach06-07	icecube	240			239800000000								
2023-04-12	peach08	rz	120										119900000000	
2023-05-30	peach09	pitz	120							119900000000				
2023-04-02	quitte01	rz	100										999000000000	
2024-03-08	Peach11-15	Atlas	600	479600000000	119900000000									
2024-03-28	Peach16-18	icecube	360			359700000000								
2024-03-28	papaya00	rz/parallel/Theorie	218					502500000000			117502731059	500000000000	17252731059	
	In work/ Ordered		0											
Lustre Zn	Lustre Zn													
			Total	Atlas	icecube	CTA	Parallel	Hess	Sonst	That	pitz	Frei		
EndOfWarrenty	Storage TB	Group	2774	113	463	1295	98	297	136	98	2	271	0	
2011-12-10	ersatzlos abgeschaltet	NAF	0											
2013-01-09	Plus1-4 fs4 ersetzt fs17	Parallel	0											
2013-03-15	ssu45,46 fs5 durch fs18	CTA	0											
2013-08-20	Obst12-15 fs6 durch fs18	Icecube	0											
2013-10-04	Obst16-20 fs5 durch fs18	CTA	0											
2013-10-04	obst21,22 fs6 durch fs18	AT	0											
2014-06-21	Atoss1-4 fs7	AT/CTA	0											
2014-12-28	Hessoss1-3 fs8	HESS	0											
2015-02-17	Ctaoss1-4 fs9	CTA	0			0								
2016-07-04	Miscoss1-5 fs10-12	HESS/icecube	0		0			0		0				
2016-08-23	Ctaoss5-9 fs13	CTA	0			0								
2016-11-21	Atlasoss1-4 fs14	Atlas	0	0										
2017-02-10	Ctaoss10-12 fs13	CTA	0			0								
2017-05-18	I3oss5-8 fs15	Icecube	0											
2017-08-30	Ctaoss13-19 fs16	CTA	0											
2017-12-16	Nicoss1-3 fs17	NIC	0											
2019-06-24	Atoss5-8 fs18	AT/CTA	240			228918320903							11081679097	
2019-06-24	Ctaoss20-23 fs19	CTA	240		125454276729	103464044174							5961253446	
2020-07-18	Atoss9-11 fs20	CTA/Ice/HESS	240		75096644177	75096644177		75096644177					14710067469	
2021-08-23	Atoss12-15 fs21	CTA/THAT	400			329853488333				54975581389			15170930278	
2023-04-11	Miscoss6-9 fs22	CTA/HESS/icecube/Atlas	484	75499798441	59373627900	178267485250		74766790689	4200867426		1010084682	91082213039		
2023-05-11	Miscoss10-11 fs22	CTA/HESS/icecube/Atlas	240	37749899220	29686813950	89133742625		37383395344	2100433713		505042341	43440672806		
2023-12-13	Miscoss12-18 fs23	CTA/HESS/icecube/nic/magic	840		173722837189	290271069733	98164398127,84	109951162778	4947902325	42880953483		120061776365		
2024-04-05	Miscoss19 fs23	Pueschel	120						120000000000					2804
	Ordering		0											
	In work/ Ordered		0											
afs Zn	afs Zn													
			Total	Atlas	AT	CTA	Parallel	Pitz	DV					
EndOfWarrenty	Storage TB		266	13	47	16	53	50	87					
2012-11-06	zyklop39	test	0,27						0,27					
2012-11-21	zyklop40	that	4,36		4,36									
2012-11-21	zyklop41	I3/cms/lc	4,36						4,36					
2012-11-21	zyklop42	ape/qcdf	4,36				4,36							
2012-11-21	zyklop43	theorie/ecad	4,36						4,36					
2013-03-10	zyklop45	cta	6,54			6,54								
2013-12-01	pitzafs3	pitz	6,54					6,54						
2014-01-28	zyklop46	atlas	6,54	6,54										
2014-01-28	zyklop47	atlas	6,54	6,54										
2014-10-27	zyklop49	hess	4,91		4,91									
2014-10-27	zyklop50	nic/alpha/etmc	4,91				4,91							
2014-10-27	zyklop51	dv/exps/grid/herab/her.es/zeu	4,91						4,91					
2014-10-27	zyklop52	amanda	4,91		4,91									
2015-02-02	zentaur5	dv	1,6						1,6					
2015-02-02	zentaur6	dv	1,87						1,87					
2015-03-28	zyklop48	dv/cms/lc/ecad/h1/theorie	18,19						18,19					
2016-05-17	obst68	at/amanda/tauros/domtest	32,74		32,74									
2017-05-08	zyklop53	cta	9,54			9,54								
2018-02-21	zyklop54	dv	43,64						43,64					
2018-02-21	zyklop55	dv/alpha/ape/etmc/nic/qcdf	43,64				43,64							
2018-04-16	pitzafs4	pitz	43,64					43,64						
2018-05-16	zentaur7	dv/infra	3,27						3,27					
2021-03-10	zentaur8	dv/infra	2,2						2,2					

Storage

2021-03-10	zentaur9	dv/infra	2,2						2,2					
	In work/ Ordered		0											

75,64 Kosten Folgejahr Jahr	96 1 Art	0,89 Aufwuchs Ersatz in TB	0,79 1,1 Euro	Euro im Jahr	Aufwuchs/pledge/Kosten mit Aufwuchs	TB Preis im Jahr
2018	dcache ZN	0	0		999,59	75609,63
2018	afs Zn	0	0		0	75,64
2018	lustre Zn	0	0	0	0	75609,63
2019	dCache ZN	117,19	8864,17		1318,97	108632,11
2019	afs Zn	32,74	2476,64		3,27	2724,31
2019	lustre Zn	0	0	11340,81	0	111356,42
2020	dCache ZN	664,06	50230,27		1648,29	174908,27
2020	afs Zn	9,54	721,98		0,95	794,17
2020	lustre Zn	0	0	50952,25	0	175702,44
2021	dCache ZN	702,57	53142,94		2010,55	205221,99
2021	afs Zn	138,6	10483,8		13,86	11532,18
2021	lustre Zn	480	36307,52	99934,26	48	39938,27
2022	dCache ZN	5833,54	441253,15		2409,02	485378,47
2022	afs Zn	0	0		0	75,64
2022	lustre Zn	0	0	441253,15	0	485378,47

Storage



Storage



2904,201
30



Storage

CPU

GridZn				Total	T2		LHCb Share		AT		Other Exp.									
EndOfWarrenty	Faireshare (%)	Group	HS pro core	#Cores	HS06	#Cores	HS06	#Cores	HS06	#Cores	HS06	#Cores	HS06							
	Cores Fairshare (%)			94024	36,49	1681	34155	20	412	2700	58,60	4,47	4184							
EndOfWarrenty	Total Cores /Bench		20,313	4608	93,600,18	1714	34120	0	0	2712	55970	182	3510							
2009-03-20	Opteron			7,500	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00						
2010-07-15	Clovertowns,E5345,blade30-9			7,375	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00						
2010-12-07	Clovertowns,E5345,tcx001-f			7,375	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00						
2011-08-28	Harpertowns, E5440,blade70-f			8,750	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00						
2012-09-14	Nehalem E5520,jux00-1f	LHCb		11,750	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00						
2013-11-03	Westmere X5660 2.8,jux20-f	Icecube/CTA		15,640	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00						
2015-07-11	Westmere X5675 3.06 jux30-3f	Icecube/CTA		17,097	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00						
2015-09-03	Westmere X5675 3.06 jux40-4f	Atlas		17,097	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00						
2015-08-18	Sandy Bridge E5-2660 2.2 jux50-6f	Atlas		20,038	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00						
2017-08-27	Sandy Bridge E5-2660 2.2 jux70-7f	Atlas		20,038	256	5,129,76	202	4,047,70	0	0,00	0	0,00	54	1,082,06						
2018-12-09	E5-2640v3 2.6 jux80-8f	Icecube/CTA		23,174	256	5,932,48	0	0,00	0	0,00	256	5,932,48	0	0,00						
2018-12-09	E5-2640v3 2.6 jux90-9f	Atlas		23,174	256	5,932,48	256	5,932,48	0	0,00	0	0,00	0	0,00						
2019-06-21	E5-2640v3 2.6 juxa0-af	Icecube/CTA		23,174	256	5,932,48	0	0,00	0	0,00	256	5,932,48	0	0,00						
2020-10-04	E5-2640v4 2.4 juxb0-bf	Icecube/CTA		23,174	320	7,415,60	0	0,00	0	0,00	320	7,415,60	0	0,00						
2020-11-09	E5-2640v4 2.4 juxc0-df	Atlas		23,174	640	14,831,20	200	4,634,75	0	0,00	440	10,196,45	0	0,00						
2022-11-07	Skylake Gold 6130 2.1 juxe0-ef	Atlas		18,310	512	9,374,72	200	3,662,00	0	0,00	312	5,712,72	0	0,00						
2022-11-07	Skylake Gold 6130 2.1 juxf0-ff	Atlas		18,310	512	9,374,72	200	3,662,00	0	0,00	312	5,712,72	0	0,00						
2022-11-07	Skylake Gold 6130 2.1 juxg0-gf	Atlas		18,310	512	9,374,72	200	3,662,00	0	0,00	312	5,712,72	0	0,00						
2023-11-12	Skylake Gold 6130 2.1 juxh0-hf	Atlas		18,310	512	9,374,72	200	3,662,00	0	0,00	312	5,712,72	0	0,00						
2024-10-24	Epyc Rome 7702P 2.0 lux00-08	Atlas		18,971	576	10,927,30	256	4,856,58	0	0,00	192	3,642,43	128	2,428,29						

Farm ZN				Total	NIC		THAT		GPU		Icecube		PITZ		CTA/Hess		Atlas/LHCb		
EndOfWarrenty	Faireshare (%)	Group	HS pro core	#Cores	HS06	#Cores	HS06	#Cores	HS06	#Cores	K20 Äqui	#Cores	HS06	#Cores	HS06	#Cores	HS06	#Cores	HS06
	Cores Fairshare (%)			100,00	2,88	7,68	267	5356	37,49	5,76	35,99	6,00	4184	25100	208	4184			
2010-06-18	Aus: Clovertown E5345 blade0,1,2			7,375	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2010-06-18	Aus: 5160			0,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2011-04-10	Ersetzt: Harpertown E5440 blade4	Icecube		8,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2011-05-14	Aus: Harpertown E5450 3.0 blade5			8,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2011-07-09	Aus: Harpertown E5450 3.0 blade6	Icecube		8,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2012-01-25	Ersetzt: wgs1 Harpertown L5430 2.66,blade80-81			8,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2012-09-14	Ersetzt: blade9: Nehalem X5550 2.67, blade9	PITZ		14,250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2012-09-14	Ersetzt: Nehalem X5550,tcx09x ->blade-gh	Atlas/LHCb		14,250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-11-03	Ersetzt: Westmere X5660 2.8,bladea -> bladeg	Icecube		15,640	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2013-11-03	Ersetzt: Westmere X5660 2.8,bladeb -> bladeh	PITZ		15,640	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2015-01-05	Westmere X5650 2.67 bladed0-7 GPU	Icecube		13,870	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2015-05-04	Sandy Bridge E5-2660 2.20 bladee0-ef	HESS/CTA		20,038	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2015-07-11	Westmere X5675 3.06 bladec0-cf	Icecube		17,097	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2015-08-22	Sandy Bridge E5-2660 2.20 bladef0-ff	CTA/Helmholtz		20,038	256	5130	0	0	0	0	0	0	0	0	256	5130	0	0	0
2015-09-03	Westmere X5675 3.06 tcx170-f	Atlas/LHCb		17,097	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2017-06-15	SandyBridge E5-2660 2.20 kepler00-15	Icecube		20,038	256	5130	0	0	0	32	32	256	5130	0	0	0	0	0	0
2018-12-09	Haswell E5-2640v3 2.60 bladeg0-gf	Pitz/All		23,174	256	5932	0	0	0	0	0	0	256	5932	0	0	0	0	0
2019-05-01	Haswell E5-2640v3 2.6 kepler16-17	Icecube		23,174	32	742	0	0	0	8	32	32	742	0	0	0	0	0	0
2019-06-25	Haswell E5-2640v3 2.6 kepler18-26	Icecube		23,174	144	3337	0	0	0	36	144	144	3337	0	0	0	0	0	0
2019-06-21	Haswell E5-2640v3 2.60 bladeh0-hf	Icecube/Pitz		23,174	256	5932	0	0	0	0	0	128	2966	128	2966	0	0	0	0
2020-10-04	Broadwell E5-2640v4 2.40 bladei0-f	Alle		23,174	320	7416	0	0	0	0	0	0	0	0	0	0	0	0	0
2022-11-07	Skylake Gold 6130 bladej0-jf	Alle		18,310	512	9375	0	0	0	0	0	0	0	0	0	0	0	0	0
2022-11-07	Skylake Gold 6130 bladek0-kf	Alle		18,310	512	9375	0	0	0	0	0	0	0	0	0	0	0	0	0
2022-11-24	Skylake Gold 6130 pasca01-06	Icecube		18,310	192	3516	0	0	0	36	288	192	3516	0	0	0	0	0	0
2024-05-05	Skylake Gold 6130 turing01-05	Icecube		18,310	160	2930	0	0	0	24	768	160	2930	0	0	0	0	0	0
2024-10-18	Epyc Rome 7702P pizza00-08	dv		18,971	576	10927	64	1214	256	4857	0	192	3642	0	64	1214	0	0	0

HPC				Total	NIC		THAT		GPU		Icecube		PITZ		CTA/Hess		Atlas/LHCb		
EndOfWarrenty	Cores Fairshare (%)	Group	HS pro core	#Cores	HS06	#Cores	HS06	#Cores	HS06	#Cores	HS06	#Cores	HS06	#Cores	HS06	#Cores	HS06	#Cores	HS06
	Total Cores /Bench			100	1792	1664	25725	128	2565	0	0	0	0	0	0	0	0	0	0
2012-09-14	Nehalem X5560 2.8 pax0			14,250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2012-09-14	Nehalem X5560 2.8 pax1-2	NIC		14,250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CPU

2012-09-14	Nehalem X5560 2.8 pax3	NIC	14,250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2012-12-22	Nehalem X5560 2.8 pax4-7	THAT	14,250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2012-12-22	Nehalem X5560 2.8 pax8	NIC	14,250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2016-01-03	Sandy Bridge E5-2660 2.20 pax90-f	NIC/THAT	20,038	256	5130	128	2565	128	2565	0	0	0	0	0	0	0	0	0	0	0
2020-12-16	Haswell E5-2640v3 2.60 pax10-00 pax10-31	NIC	23,234	512	11896	512	11896	0	0	0	0	0	0	0	0	0	0	0	0	0
2022-02-01	Broadwell E5-2697v4 2.60 pax11-00 pax11-31	Alle	11,000	1024	11264	1024	11264	0	0	0	0	0	0	0	0	0	0	0	0	0

Interactive

			Total	NIC		THAT		Icecube		PITZ		CTA		HESS		ATLAS		
EndOfWarrenty	Cores Fairshare (%)	Group	#Cores	HS06	#Cores	HS06	#Cores	HS06	#Cores	HS06	#Cores	HS06	#Cores	HS06	#Cores	HS06	#Cores	HS06
	Total Cores /Bench		772	7842	32	115742	596	1791	56	1234	16	371	28	617	16	371	28	617
2012-11-11	Ersetzt: Nehalem X5550 2.67,blade82-8f	All	14,250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2014-10-24	wgs00 X5690 3.47	Icecube	20,511	12	246	0	0	12	246	0	0	0	0	0	0	0	0	0
2014-10-24	wgs01 X5690 3.47	CTA	20,511	12	246	0	0	0	0	0	12	246	0	0	0	0	0	0
2014-10-24	wgs02 X5690 3.47	Atlas	20,511	12	246	0	0	0	0	0	0	0	0	0	0	12	246	0
2014-10-24	wgs03 X5690 3.47	DV	20,511	12	246	0	0	0	0	0	0	0	0	0	0	0	0	0
2014-10-24	wgs04 X5690 3.47	ztf (ice)	20,511	12	246	0	0	12	246	0	0	0	0	0	0	0	0	0
2014-10-24	wgs05 X5690 3.47		20,511	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2018-12-09	Haswell E5-2640v3 2.60 wgs10	THAT	23,174	16	371	0	0	16	371	0	0	0	0	0	0	0	0	0
2018-12-09	Haswell E5-2640v3 2.60 wgs11	Atlas	23,174	16	371	0	0	0	0	0	0	0	0	0	0	0	16	371
2018-12-09	Haswell E5-2640v3 2.60 wgs12	HESS	23,174	16	371	0	0	0	0	0	0	0	0	0	16	371	0	0
2018-12-09	Haswell E5-2640v3 2.60 wgs13	PITZ	23,174	16	371	0	0	0	0	0	16	371	0	0	0	0	0	0
2018-12-09	Haswell E5-2640v3 2.60 wgs14	DV	23,174	16	371	0	0	0	0	0	0	0	0	0	0	0	0	0
2018-12-09	Haswell E5-2640v3 2.60 wgs15	Icecube	23,174	16	371	0	0	0	0	16	371	0	0	0	0	0	0	0
2018-12-09	Haswell E5-2640v3 2.60 wgs16	Icecube	23,174	16	371	0	0	0	0	16	371	0	0	0	0	0	0	0
2018-12-09	Haswell E5-2640v3 2.60 wgs17	THAT	23,174	16	371	0	0	16	371	0	0	0	0	0	0	0	0	0
2018-12-09	Haswell E5-2640v3 2.60 wgs18	CTA	23,174	16	371	0	0	0	0	0	0	0	16	371	0	0	0	0
2018-12-09	Haswell E5-2640v3 2.60 wgs19	LC	23,174	16	371	0	0	0	0	0	0	0	0	0	0	0	0	0
2018-12-09	Haswell E5-2640v3 2.60 wgs1a	Theorie	23,174	16	371	0	0	0	0	0	0	0	0	0	0	0	0	0
2018-12-09	Haswell E5-2640v3 2.60 wgs1b	NIC	23,174	16	371	16	371	0	0	0	0	0	0	0	0	0	0	0
2018-12-09	Haswell E5-2640v3 2.60 wgs1c	CMS	23,174	16	371	0	0	0	0	0	0	0	0	0	0	0	0	0
2018-12-09	Haswell E5-2640v3 2.60 wgs1d	DV	23,174	16	371	0	0	0	0	0	0	0	0	0	0	0	0	0
2018-12-09	Haswell E5-2640v3 2.60 wgs1e		23,174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2018-12-09	Haswell E5-2640v3 2.60 wgs1f	NIC	23,174	16	371	16	371	0	0	0	0	0	0	0	0	0	0	0
2021-06-23	Broadwell E5-2640v4 2.40 wgs20	NIC	23,174	20	463	0	0	20	463	0	0	0	0	0	0	0	0	0
2022-11-15	Skylake Gold 6130 wgs21	THAT	18,310	32	586	0	0	32	586	0	0	0	0	0	0	0	0	0
2023-11-12	Skylake Gold 6130 wgs30	free	18,310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-12	Skylake Gold 6130 wgs31	Atlas	18,310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-12	Skylake Gold 6130 wgs32	free	18,310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-12	Skylake Gold 6130 wgs33	free	18,310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-12	Skylake Gold 6130 wgs34	DV	18,310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-12	Skylake Gold 6130 wgs35	Icecube	18,310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-12	Skylake Gold 6130 wgs36	free	18,310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-12	Skylake Gold 6130 wgs37	free	18,310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-12	Skylake Gold 6130 wgs38	CTA	18,310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-12	Skylake Gold 6130 wgs39	free	18,310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-12	Skylake Gold 6130 wgs3a	free	18,310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-12	Skylake Gold 6130 wgs3b	free	18,310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-12	Skylake Gold 6130 wgs3c	free	18,310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-12	Skylake Gold 6130 wgs3d	free	18,310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-12	Skylake Gold 6130 wgs3e	ztf (ice)	18,310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-12	Skylake Gold 6130 wgs3f	free	18,310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Beschaffungen

2 Jahre nach Support

	Cores	Preis nach Nutzung	Gesamt	Preis pro core		
2017 gridZn	0	0		224,61	115000	512
WGS	0	0		224,61		
Farm ZN	0	0		224,61		
HPC	0	0	0	224,61		
2018 gridZn	0	0		224,61		
WGS	0	0		224,61		
Farm ZN	0	0		224,61		
HPC	256	57500	57500	224,61		
2019 gridZn	256	57500		224,61		
WGS	0	0		224,61		
Farm ZN	256	57500		224,61		

HPC	0		115000	224,61
2020 gridZn	256	57500		224,61
WGS	292	65585,94		224,61
Farm ZN	176	39531,25		224,61
HPC	0	0	162617,19	224,61
2021 gridZn	256	57500		224,61
WGS	0	0		224,61
Farm ZN	576	129375		224,61
HPC	0	0	186875	224,61
2022 gridZn	960	215625		224,61
WGS	0	0		224,61
Farm ZN	0	0		224,61
HPC	512	115000	330625	224,61

CPU

Tape

Tape	Total	TSM Anzahl	TB	HH Anzahl	TB	OSM ift Anzahl	TB	psm icecube Anzahl	TB	Frei Anzahl	TB	Test OSM Anzahl	TB	Leda.ssu44 Anzahl	TB	Freie Slots Anzahl	TB	Offline Anzahl	TB
LTO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LTO3	1234	177	70,8	787	314,78	1	0,4	266	106,39	0	0	3	1,2	0	0	0	0	0	0
LTO4	2392	0	0	0	0	1132	905,54	1249	999,14	0	0	1	0,8	10	8	0	0	1	0,8
LTO6	1159	0	0	0	0	675	1672,65	414	1025,89	63	156,11	2	4,96	5	12,39	303	750,83	140	346,92
Total	4785	177	70,8	787	314,78	1808	2578,59	1929	2131,42	63	156,11	6	6,96	15	20,39	303	750,83	141	347,72
in Prozent	0,98	3,7	1,35	16,45	5,99	37,78	49,04	40,31	40,53	1,32	2,97	0,13	0,13	0,31	0,39	6,33	14,28	2,95	6,61
		Summe loader	Summe TB			Summe Tape	Summe TB												
Slots		4785	5258,66			3806	4873,08												
Free-tapes offline						119	294,88												
Total						-83	-205,67												
						3925	5167,97												
		TB/tape	TB Preis																
LTO2		0,18																	
LTO3		0,4																	
LTO4		0,8																	
LTO6		2,48	9,08																
LTO7		6	20,83																
LTO8		12	33,33																
		TB	Slots	Freed slots	Total after migration														
current capacity	5623,92		4109																
Migration LTO2/3	106,79		43,1	226	6183,95														
Migration LTO4	1904,68		768,64	1613	10180,96														
LTO6	2698,54		1124,39																
Vollausbau LTO6	9726,15		3925																
Vollausbau LTO7	23550		3925																
Vollausbau T10e	47100		3925																
												96,88	85,25						
	20					10	5	13,33											
	2000		84,3			100000	100000												
	0,88		475																
1	148368			148368		112666,67	112666,67												
2	130563,84			278931,84		112666,67	225333,33												
3	114896,18			393828,02		112666,67	338000												
4	101108,64			494936,66		112666,67	450666,67												
5	88975,6			583912,26		112666,67	563333,33												
6	78298,53			662210,79		112666,67	676000												
7	68902,71			731113,49		112666,67	788666,67												
8	60634,38			791747,87		112666,67	901333,33												
9	53358,26			845106,13		112666,67	1014000												
10	46955,26			892061,39		112666,67	1126666,67												
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Summary

Storage	TB (capacity)	Ohne Wartung	2020 Mit Wartung			
dcache		7317,37	1366,64	2387,16	3446,38	7200,18
lustre		2774,05	480	240	2084,2	2804,2
afs		266,07	261,4	0	4,4	265,8
Tape		5258,66		0		10357,48
Total		15616,14	2108,04	2627,16	5534,98	10270,18

Cpu	Cores	HepSpec06	Ohne	2020 Mit Wartung		
WGS		772	7841,75	240	0	564
Farm		3472	69740,52	1200	320	1952
HPC		1792	28289,76	256	512	1024
GRID		4608	93600	1024	960	2624
Total		10644	199472,2	2720	1792	6164

5440 3584 12328 21352

Ersetzungen	Euro: Storage und Computing	Jährlicher Aufwuchs in Prozent	Exponent der folgenden Jahre	Kosten Ersatz plus Aufwuchs
Jahr	Euro	0,05	0	
2017	#REF!	#REF!	0	#REF!
2018	#REF!	166651	1	#REF!
2019	57500	174984	2	232484
2020	126341	183734	3	310075
2021	213569	192920	4	406489
2022	286809	202566	5	489376
2023	771878	212692	6	984570

Date it broke		Purchase year									DiskFailures
Year	Month	2015	2014	2013	2012	2011	2010	2009	2008	2007	
2014	8			14			48	4			
2014	9			56	12		60	15		8	
2014	10			72		16		16	2		
2014	11			14	36	3		19	2		
2014	12		0	14	12	12	24	4	0	8	
2015	1			28	12		12	2		8	
2015	2		14		12	2	0	6			
2015	3			42	1	7	24		2	7	
2015	4		70	308		38	64	12	20	8	
2015	5	14	14	14		14	60	4	12		
2015	6			2		1	1	3			
2015	7		1	3		1	2	2			
2015	8		2	4		4		61	1		
2015	9		2	4	1	1	7		3		
2015	10	3	1	5			1	1	5		
2015	11		1	5	1	7	3	1			

