




Proposal to drop Capacity view in REBUS

Information System Task Force
16th June 2016

What is the capacity view?

WLCG REsource, Balance & Usage



REBUS: Topology

Topology | Pledges | **Capacities** | Report | Trends | Accounting

Topology

All Tiers | Tier 0 | Tier 1 | Tier 2

JSON | CSV | XLSX

Federation Capacities
Site Capacities
VO Shares
Capacity and Pledge Comparison

Tier	Country	Federation	Storage Capacity Comparison	Federation Accounting Name	Site(s)	Infrastructure
Tier 0	Switzerland	CH-CERN		CERN-PROD	CERN-PROD	EGI
Tier 1	Canada	CA-TRIUMF		TRIUMF-LCG2	TRIUMF-LCG2	EGI

Where are the values taken from?

- The values are taken from the BDII (lcg-bdii) that is queried once per hour
 - Queries are in GLUE 1
 - This is the case for both EGI and OSG
- Moreover, MyOSG is queried also once per hour and some values are added
 - Using the MyOSG Vofeed:
http://myosg.grid.iu.edu/rgsummary/xml?datasource=summary&summary_attrs_showwlcg=on&all_resources=on&gridtype=on&gridtype_1=on&active=on&active_value=1&disable_value=1
 - And it overwrites what has been collected from the BDII if the site appears in both BDII and MyOSG (see known issues!)
- No validation or consistency check is performed

Capacity views in REBUS

- **Federations Capacities**

<https://rebus.cern.ch/apps/capacities/federations/>

- **Sites Capacities**

<https://rebus.cern.ch/apps/capacities/sites/>

- **VO shares**

https://rebus.cern.ch/apps/capacities/vo_shares/

- **Pledge and Capacity comparison**

https://rebus.cern.ch/apps/capacities/pledge_comparison/

- **Storage Capacity Summary**

https://rebus.cern.ch/apps/capacities/site_storage/

Federations Capacities

- Aggregation of capacities published by the sites within the federation

REBUS: Federation Capacities

Capacities > Federation Capacities

Year: 2016 Month: 6

Tier	Country	Federation	Physical CPU	Logical CPU	HD/SSD/CSS	Total Online Storage (GB)	Total Nearline Storage (GB)
Tier 0	Switzerland	CH-CERN	46,580	51,240	444,826	0	125,619,540
Tier 1	Canada	CA-TBLMP	649	4,820	73,397	7,075,471	17,264,300
Tier 1	France	FR-C2H2P4	679	13,645	140,118	12,213,538	1,760,598
Tier 1	Germany	DE-NIT	1,234	18,622	227,290	12,762,236	48,472,310
Tier 1	Italy	IT-INFN-CNAF	1,034	18,544	202,215	18,240,701	18,262,742
Tier 1	Netherlands	NL-TI	5,835	19,076	90,325	9,261,068	0
Tier 1	Finland	FI-NSG	3,759	10,144	692,294	3,270,108	3,484,000
Tier 1	Republic of Korea	KR-KISTI-CSDC	912	1,024	19,227	0	0
Tier 1	Russian Federation	RU-CAS-TI	558	4,908	87,491	6,024,991	0
Tier 1	Russian Federation	RU-JINR-TI	1,020	2,600	24,072	2,464,700	3,478,217
Tier 1	Spain	ES-PC	268	3,188	26,256	3,027,210	13,008,364
Tier 1	Sweden	SE-NSG	347	2,782	16,209	6,728,436	0
Tier 1	UK	UK-TI-PAL	411	4,940	26,480	12,969,217	19,201,756
Tier 1	USA	US-PHIL-CMS	0	0	50,200	12,000,000	22,000,000
Tier 1	USA	US-TI-ORNL	814	13,024	120,200	11,000,000	27,000,000
Tier 2	Australia	University of Melbourne	122	520	10,489	1,071,881	0
Tier 2	Austria	Austrian Tier 2 Federation	27	362	8,839	122,938	0
Tier 2	Belgium	Belgian Tier 2 Federation	471	4,863	26,787	3,461,721	0
Tier 2	Brazil	BR-CC- Sao Paulo	192	1,162	13,948	818,080	0
Tier 2	Canada	Canada-East Federation	252	1,228	17,850	2,012,279	0
Tier 2	Canada	Canada-West Federation	683	2,904	60,221	1,491,432	0
Tier 2	China	CHN-Beijing	122	1,020	11,747	140,488	0
Tier 2	Czech Republic	CZ-UAS, Prague	594	4,082	38,220	3,128,879	200,200

Sites Capacities

- BDII variables:
 - Sum of all the SubClusters in the site:
 - GlueSubClusterLogicalCPUs
 - GlueSubClusterPhysicalCPUs
 - GlueProcessorOtherDescription
 - Sum of all the SEs in the site:
 - GlueSETotalOnlineSize
 - GlueSETotalNearlineSize

- MyOSG variables:
 - HEPSPROC
 - StorageCapacityMin
 - StorageCapacityMax

REBUS: Site Capacities

Toplogy | Hedges | Capacities | Reports | Trends | Accounting

Capacities > Site Capacities

Vol: [ALL] Year: [2018] Month: [6]

Note: Sorting by multiple columns of the same time can be activated by shift+clicking on the column headers. Shift the cursor to add to the sort. Clicking mouse over the column headers to get descriptions of column names.

Site Name	Physical CPU	Logical CPU	I/EPSPROC	Total Online Storage (GB)	Total Nearline Storage (GB)
ARI-T2	816	8,078	80,617	1,712,600	0
Austria-ATLAS	177	970	10,465	1,274,881	0
BEG-HALIB-VUB	251	3,540	26,643	2,850,721	0
BEIJING-LCG2	122	1,020	11,147	942,403	0
Belgium-UCL	220	1,320	12,144	384,000	0
BNL-ATLAS	814	13,024	130,000	11,200,000	27,000,000
BNL-ATLAS_Tier2	396	3,076	46,535	2,620,000	0
BUDAPEST	159	764	8,954	0	0
CA-MCILL-CLUMED-T2	80	480	6,780	1,163,741	0
CA-SUUNET-T2	212	848	10,800	845,338	0
CA-VICTORIA-WESTGRID-T2	240	1,440	20,679	819,483	0
CTSP	124	708	14,575	199,976	0
DESH-FRSD	48,560	51,240	444,828	0	123,679,642
DESY-LEGO	324	1,000	25,102	1,259,474	0
DT-UMD-T2	852	6,276	88	393,000	0
Gene	80	160	65,650	0	0
OSQAR-LCG2	313	4,460	74,334	1,480,812	0
OSQAR-T2	1,904	12,192	173,126	1,228,948	0
DESY-HH	1,202	13,380	142,427	13,871,376	392,500
DESY-ZH	296	2,368	28,287	1,762,888	2,627,552
EELA-UTPSH	48	384	4,441	185,303	0
EPFL-LET	48	192	1,327	1,968	0
FLHP-T2	128	726	9,181	1,157,906	0
FVH-HALIB	163	672	7,085	585,971	0
FR-LCG2	1,224	18,632	227,280	10,752,296	48,473,370

Historic Information

- Both site and federation capacities can show an historic value as well:
 - Selecting year and month
 - In that case, an average of the values published during the selected month is shown

VO shares

- BDII variables:
 - For EGI sites:
 - GlueCECapability
 - For OSG sites:
 - GlueSiteSponsor

Tier	Country	Federation	Site Name	ALICE	ATLAS	CMS	LHCb	SUW
2	Australia	University of Melbourne	Australia ATLAS		100			100
2	Austria	Austrian Tier-2 Federation	HEPHY UBR					0
1	Austria	Austrian Tier-2 Federation	HEPHY-Vienna			25		25
1	Belgium	Belgian Tier-2 Federation	BEGIS-ULB-VUB					0
2	Belgium	Belgian Tier-2 Federation	BELGI-M-ULCL					0
2	Brazil	SPRACE, Sao Paulo	SPRACE					0
1	Canada	CA-TRIUMF	TRIUMF-LCG2		56			56
1	Canada	Canada-East Federation	CA-MCGILL-CLUMBO-T2		10			10
1	Canada	Canada-East Federation	CA-SCINET-T2		40			40
1	Canada	Canada-West Federation	CA-VICTORIA-WESTGRID-T2		40			40
2	Canada	Canada-West Federation	SPU-LCG2		98			98
2	China	HEP, Beijing	BEIJING-LCG2					0
1	Czech Republic	P2U AS, Prague	pragueleg2	25	37			62
1	Estonia	NICPB, Tallinn	T2_Estonia					0
1	Finland	INDI-FIN Tier2	FI HIP-T2					0
1	France	CC-IN2P3-AT	IN2P3-CC-T2		59	41		100
2	France	ORNL, Marseille	IN2P3-CPN		60		20	80
1	France	FR-CUNEIF	IN2P3-CC	14	40	20	26	100
1	France	GRIP, Paris	GIP	90	37	47	10	124
1	France	IPHC, Strasbourg	IN2P3-IREC	10		50		60
2	France	LAPP, Annecy	IN2P3-LAPP		55		20	75
2	France	LPC, Clermont-Ferrand	IN2P3-LPC	35	45		15	95
1	France	LPSC Grenoble	IN2P3-LPCL					0
1	France	SUBATECH, Nantes	IN2P3-SUBATECH	100				100
1	Germany	ATLAS Federation DESY	DESY-FH					0
1	Germany	ATLAS Federation DESY	DESY-DH		50	1	10	61
2	Germany	ATLAS Federation FR/W	UNI-FREIBURG		95			95

Capacity and Pledge Comparison

WLCG Resource, Balance & Usage WLCG Home | Contact | GGUS | Admin Login

REBUS: Capacity and Pledge Comparison

Topology | Pledges | **Capacities** | Report | Trends | Accounting

Capacities > Capacity and Pledge Comparison

VO: ALL Capacity Year: 2016 Capacity Month: 6 Pledge Year: 2016

Please Note: April is used as the first month of pledge year by default in this view. However manual comparison option is supported. Please choose Capacity Year/Month and Pledge Year for a proper comparison.

Note: Sorting by multiple columns at the same time can be achieved by Shift clicking on the column headers which they want to add to the sort. Hovering mouse over the column headers to get descriptions of table columns.

All Tiers | **Tier 0** | Tier 1 | Tier 2

Search:

Tier	Country	Federation	Physical CPU	Logical CPU	HEPSPROC6	CPU Pledge	Total Online Storage (GB)	Disk Pledge	Total Nearline Storage (GB)	Tape Pledge
Tier 0	Switzerland	CH-CERN	48,560	51,240	444,826	840,000	0	57,800,000	133,679,643	128,200,000
Tier 1	Canada	CA-TRIUMF	849	4,820	73,397	52,000	7,579,472	4,700,000	17,364,300	11,600,000
Tier 1	France	FR-CCIN2P3	873	13,515	130,118	139,110	12,742,538	13,710,000	4,290,589	26,630,000
Tier 1	Germany	DE-KIT	1,234	18,632	227,350	168,600	10,782,236	16,925,000	46,473,310	32,700,000
Tier 1	Italy	IT-INFN-CNAF	1,834	18,544	202,315	151,925	18,340,701	15,225,000	16,382,742	35,478,000
Tier 1	Netherlands	NL-T1	2,836	19,016	302,023	70,015	9,760,068	6,719,000	0	13,851,000
Tier 1	Nordic	NDGF	3,755	70,744	852,364	45,100	9,290,138	4,710,000	5,464,000	6,770,000
Tier 1	Republic of Korea	KR-KISTI-GSDC	912	1,824	19,037	31,000	0	1,500,000	0	1,500,000
Tier 1	Russian Federation	RU-KIT-T1	558	8,928	87,494	82,000	4,439,992	6,300,000	0	7,400,000
Tier 1	Russian Federation	RU-JINR-T1	1,800	3,600	54,072	45,000	3,464,700	3,200,000	5,478,317	5,000,000
Tier 1	Spain	ES-PIC	368	3,155	38,266	56,410	6,837,510	5,049,000	13,805,364	12,693,000
Tier 1	Taiwan	TW-ASGC	347	2,782	28,209	23,000	6,538,936	3,000,000	0	4,000,000

Found a bug?

Storage Capacity Comparison

WLCG Resource, Balance & Usage WLCG Home | Contact | GGUS | Admin Login

REBUS: Storage Capacity Comparison

Topology | Pledges | **Capacities** | Report | Trends | Accounting

Capacities > Storage Capacity Comparison [View previous reports](#)

Note: Sorting by multiple columns at the same time can be activated by SHIFT clicking on the column headers which they want to add to the sort. Hovering mouse over [Create customised report](#) to edit columns.

Search:

Site Name	SE Hostname	Total Online Storage Space (GB)	Total Installed Online Storage Capacity (GB)	Total Nearline Storage Space (GB)	Total Installed Nearline Storage Capacity (GB)
AGLT2	AGLT2_classicSE	0		0	
AGLT2	head01.aglt2.org	3,662,111		0	
Australia-ATLAS	agh3.atlas.unimelb.edu.au	1,033,881		0	
Australia-ATLAS	rcrm.atlas.unimelb.edu.au	40,000		0	
BEgrid-ULB-VUB	malto.11ha.ac.be	2,680,721		0	
BEIJING-LCG2	ccrm.lhep.ac.cn	400,592		0	
BEIJING-LCG2	srm.lhep.ac.cn	539,816		0	
BeGrid-UCL	ingrid-se02.csm.ucl.ac.be	984,000		0	
BNL-ATLAS	BNL-ATLAS_classicSE	0		0	
BNL-ATLAS	dcrm.usatlas.bnl.gov	23,024,605		0	
BU-ATLAS_Tier2	BU-ATLAS_Tier2_classicSE	0		0	
BU-ATLAS_Tier2	atlas.bu.edu	0		0	
CA-MCGILL-CLLWEQ-T2	starm02.clumwq.mcgill.ca	1,163,741		0	
CA-SCINET-T2	lcg-se1.scinet.utoronto.ca	846,538		0	
CA-VICTORIA-WESTGRID-T2	charon01.westgrid.ca	849,474		0	
CA-VICTORIA-WESTGRID-T2	charon03.westgrid.ca	9		0	
CBPF	se.cat.cbpf.br	199,974		0	
CERN-PROD	ID-alice			20,827,636	
CERN-PROD	ID-wonalice-CERN-PROD	0		0	
CERN-PROD	srm-atlas.cern.ch			26,860,000	
CERN-PROD	srm-cms.cern.ch			36,997,090	
CERN-PROD	srm-eosatlas.cern.ch	0		0	
CERN-PROD	srm-eosoms.cern.ch	0		0	
CERN-PROD	srm-eodhcb.cern.ch	0		0	
CERN-PROD	srm-eosera.cern.ch	0		0	

<https://rebus.cern.ch/spgs/acc/report/browse>

Known Issues

- REBUS assumes that in case two or more GlueSubclusters in a site publish the same number in GlueSubClusterLogicalCPUs, this is doublecounting and it takes into account the value only once
- If the foreign key attribute (site) in GlueSE doesn't match the actual GOCDB site name, the SE is not taken into account
- Sites that appear in both BDII and MyOSG, get their BDII values overwritten by MyOSG values
- MyOSG doesn't publish LogicalCPUs and PhysicalCPUs, therefore, these values are only published for OSG sites if they are published in the BDII

Motivations to drop capacity view

- REBUS is just republishing information that is available in BDII/MyOSG
 - Offering a set of in principle interesting attributes through the webUI
- However, it adds a complex internal logic that prevents from showing exactly what BDII publishes
 - This is very confusing for sites
- Moreover LHC experiments do not rely on REBUS

Proposal

- Remove the capacity tab from the main menu



- Adjust federation information showing today a summary of sites capacities by just including a list of sites belonging to the federation

The screenshot shows the REBUS: Topology interface. The 'Federation Information' section is visible, showing a table with columns for Tier, Country, Federation Name, and Accounting Name. The 'Installed Capacities' section is also visible, showing a table with columns for Infrastructure, Site Name, Physical CPU, Logical CPU, HDSPACE, Disk (B), and Tape (B). The 'Installed Capacities' table is circled in red.

Infrastructure	Site Name	Physical CPU	Logical CPU	HDSPACE	Disk (B)	Tape (B)
DCI	DCI-BI	1,157	12,503	142,477	16,031,056	303,500
DCI	DCI-DI	256	2,308	39,247	5,163,030	2,025,000
Total		1,453	15,051	182,744	21,255,544	3,077,724

Plage Type	ATLAS	% of Req.	ATLAS	% of Req.	CMS	% of Req.	LHCb	% of Req.	SIEM	% of Req.
CPU (non-HVM)	74,000	46						16,000	47	
Disk (Hybrid)	2,400	30						3,400	37	

Additional material

- <https://twiki.cern.ch/twiki/bin/view/EGEE/AllAboutREBUS>