Accounting and Tags

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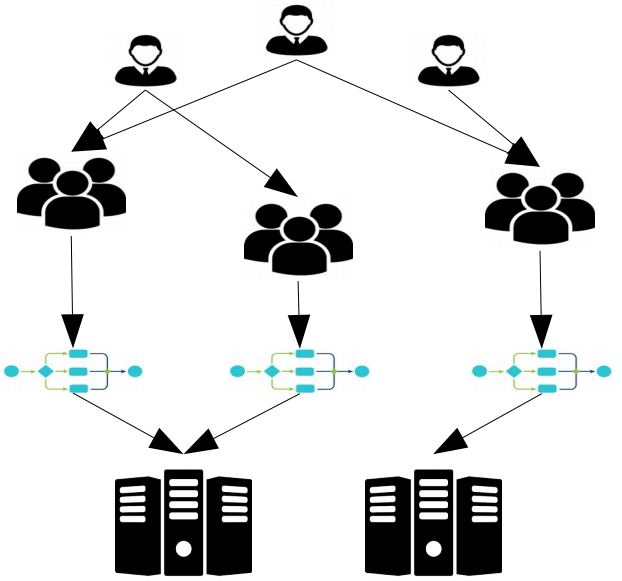
What & why

- Users may belong to different groups
- Each group work on a single pipeline
- Computing centers accounts jobs per user and experients



We need to count pipeline needs and estimate consuming for next years

Tag, a simple string

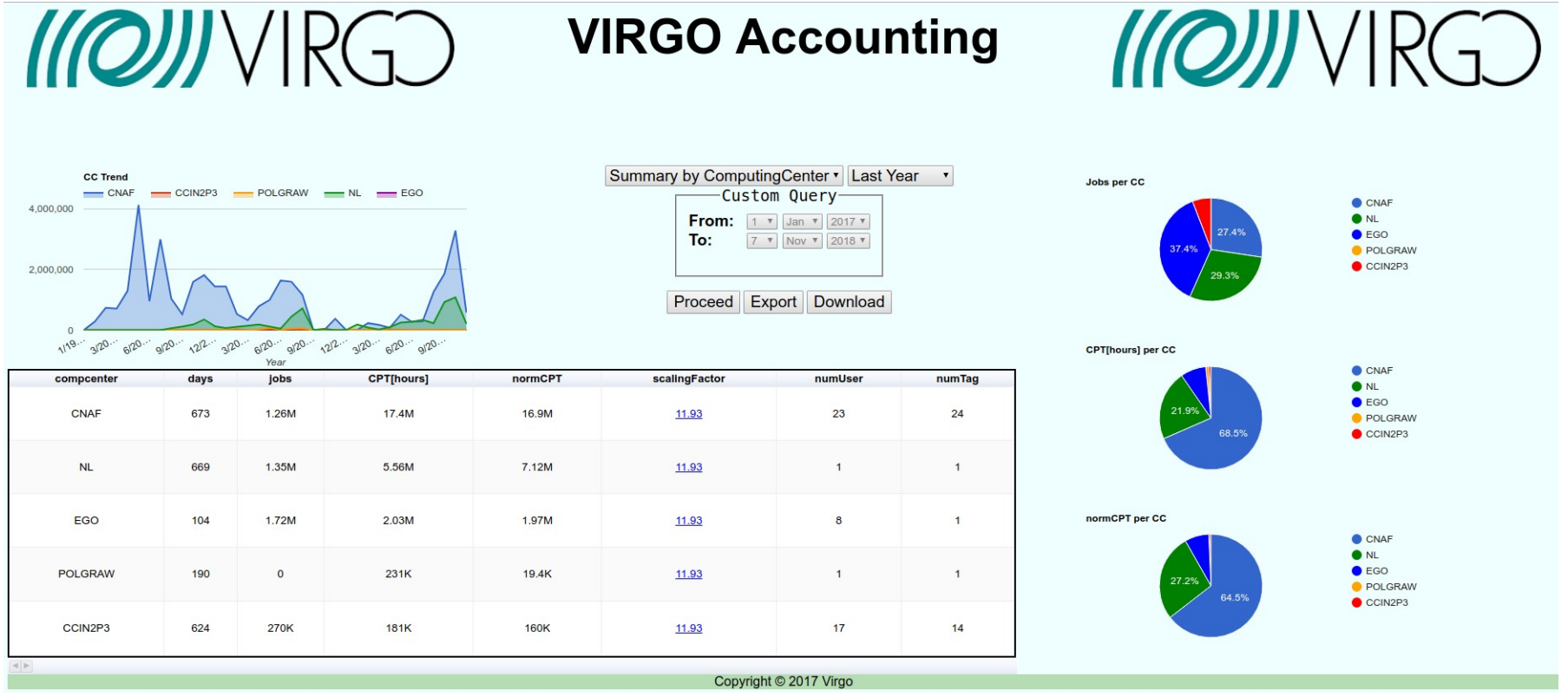
Way to tell why a job (workflow) is submitted

Qualificate the group

Virgo accounting

- Retrieve information from cc's
- Model push/pull
- Info in csv,postgres,html_page
- Main program at ego fill a database
- Web server as interface to database
- Adapt tag to be ligo-compliant
- And send daily to ligo

Accounting pages

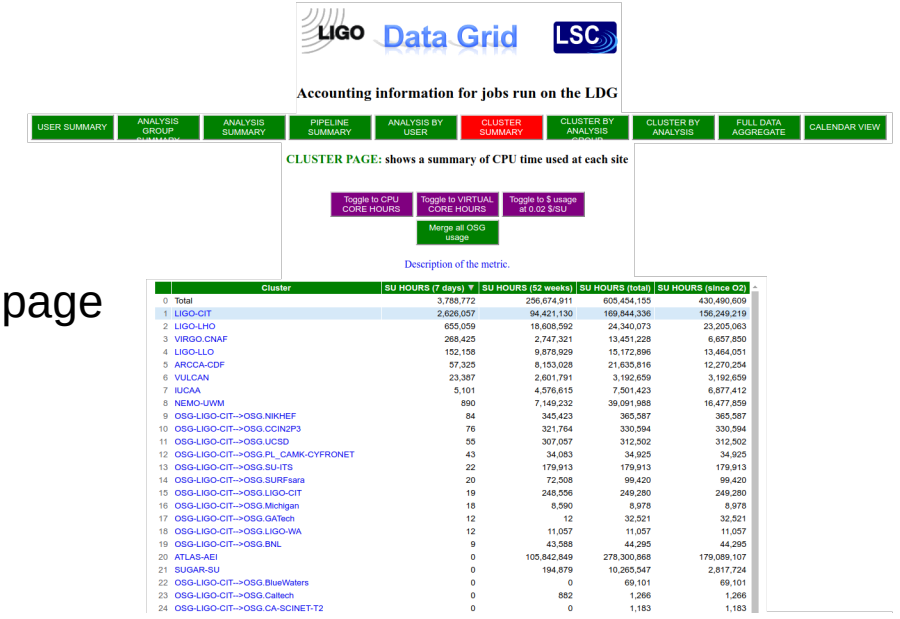


compcenter	days	jobs	CPT[hours]	normCPT	scalingFactor	numUser	numTag
CNAF	673	1.26M	17.4M	16.9M	11.93	23	24
NL	669	1.35M	5.56M	7.12M	11.93	1	1
EGO	104	1.72M	2.03M	1.97M	11.93	8	1
POLGRAW	190	0	231K	19.4K	11.93	1	1
CCIN2P3	624	270K	181K	160K	11.93	17	14

https://scientists.virgo-gw.eu/computing/ccstats/virgoAccounting/

How tag works

- Collaboration agree on some basic tags
- List of tag is freely accessible
- If we need a new tag, than we could ask
- Only recognized tags are allowed
- Cumulative of jobs goes into virgo accounting page
- ...and into collaboration accounting page
- Jobs with an unknown tag are obliated
- Some user account are shared
- Find a way to distinguish if a job is virgo/ligo
  - Prepend tag with ”name.surname.virgo”



	Cluster	SU HOURS (7 days) ▼	SU HOURS (52 weeks)	SU HOURS (total)	SU HOURS (since O2)
0	Total	3,788,772	256,674,911	605,454,155	430,490,609
1	LIGO-CIT	2,626,057	94,421,130	169,844,336	156,249,219
2	LIGO-LHO	655,059	18,608,592	24,340,073	23,205,063
3	VIRGO.CNAF	268,425	2,747,321	13,451,228	6,657,850
4	LIGO-LLO	152,158	9,878,929	15,172,896	13,464,051
5	ARCCA-CDF	57,325	8,153,028	21,635,816	12,270,254
6	VULCAN	23,387	2,601,791	3,192,659	3,192,659
7	IUCAA	5,101	4,576,615	7,501,423	6,877,412
8	NEMO-UWM	890	7,149,232	39,091,988	16,477,859
9	OSG-LIGO-CIT-->OSG.NIKHEF	84	345,423	365,587	365,587
10	OSG-LIGO-CIT-->OSG.CCIN2P3	76	321,764	330,594	330,594
11	OSG-LIGO-CIT-->OSG.UCSD	55	307,057	312,502	312,502
12	OSG-LIGO-CIT-->OSG.PL_CAMK-CYFRONET	43	34,083	34,925	34,925
13	OSG-LIGO-CIT-->OSG.SU-ITS	22	179,913	179,913	179,913
14	OSG-LIGO-CIT-->OSG.SURFsara	20	72,508	99,420	99,420
15	OSG-LIGO-CIT-->OSG.LIGO-CIT	19	248,556	249,280	249,280
16	OSG-LIGO-CIT-->OSG.Michigan	18	8,590	8,978	8,978
17	OSG-LIGO-CIT-->OSG.GATech	12	12	32,521	32,521
18	OSG-LIGO-CIT-->OSG.LIGO-WA	12	11,057	11,057	11,057
19	OSG-LIGO-CIT-->OSG.BNL	9	43,588	44,295	44,295
20	ATLAS-AEI	0	105,842,849	278,300,868	179,089,107
21	SUGAR-SU	0	194,879	10,265,547	2,817,724
22	OSG-LIGO-CIT-->OSG.BlueWaters	0	0	69,101	69,101
23	OSG-LIGO-CIT-->OSG.Caltech	0	882	1,266	1,266
24	OSG-LIGO-CIT-->OSG.CA-SCINET-T2	0	0	1,183	1,183

https://ldas-gridmon.ligo.caltech.edu/ldg_accounting/cluster_page_SU.html

In practice

- Every computing center has his system
- Not all batch system use tags
- Often a trick is needed
- Cnaf:
  - Via creamce:
    - Prepare a Job Description Language file (jdl)
    - In jdl add *CeRequirements="True || other.GlueApplicationTagName==\"name.surname.virgo.tag\"";*
    - Submit with *glite-ce-job-submit -a -r ce08-lcg.cr.cnaf.infn.it:8443/cream-lsf-virgo file.jdl*
  - Via bash
    - Login in bastion
    - Then to ui02-virgo or ui01-virgo
    - singlecore *bsub -R "select [hname!=name.surname.virgo.tag]" command*
    - Multicore *bsub -q virgo -n 4 -R "select [(mcore==1)&&(hname!=name.surname.virgo.tag)] span[ptile=4]" cmd*

.jdl

```
executable="ssh1.sh";
arguments="200";
inputsandbox={"file://PATH/ssh1.sh", "file:/PATH/eccetest"};
stdoutput="out3.out";
stderror="err2.err";
outputsandbox={"out3.out", "err2.err", "ssh1.sh", "a"};
outputsandboxbasedesturi="gsiftp://localhost";
# CPUNumber = 4;
# SMPGranularity = 4;
```