



# Lightweight sites: survey results

Ops Coordination meeting  
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v1.1

# Introduction

- The proposed survey was presented in the Ops Coordination meeting of Sep 29
- Feedback led to a few changes in the questions
- **Cath Noble** kindly implemented the survey reusing the web site that had already featured before in the operations survey
  - <http://wlcg-survey.web.cern.ch/survey/lightweight-sites>
- The survey was launched through an EGI broadcast on Oct 4
- Initial trends in the answers were reported in the lightweight sites presentation at CHEP
- A reminder EGI broadcast was sent on Nov 8

# Responses

- 51 sites so far
  - 2 sites responded twice, with different answers!
  - 2 T1 sites also covered their adjoining T2 site
  - Some T3 (?) sites also replied
- The list of sites as of Nov 30:

ARNES  
BelGrid-UCL  
BG05-SUGrid  
CA-SCINET-T2  
CA-VICTORIA-WESTGRID-T2  
CFP-IST  
DESY-HH  
EELA-UTFSM  
egee.srce.hr  
FI\_HIP\_T2  
GE-01-GRENA  
IFAE

IN2P3-CPPM  
IN2P3-IRES  
IN2P3-SUBATECH  
INFN-FRASCATI  
INFN-NAPOLI-ATLAS  
INFN-TORINO  
JINR-LCG2  
JINR-T1  
Kharkov-KIPT-LCG2  
LCG-USC2  
mainzgrid  
MPPMU  
NCG-INGRID-PT

PIC  
PSI  
RAL-LCG2  
RO-02-NIPNE  
RO-14-ITIM  
RU-Protvino-IHEP  
SAMPA  
SFU-LCG2  
T2\_HU\_Budapest  
T2\_TW\_NCHC  
UA-KNU  
UKI-LT2-QMUL  
UKI-LT2-RHUL  
UKI-LT2-UCL-HEP

UKI-NORTHGRID-LANCS-HEP  
UKI-NORTHGRID-LIV-HEP  
UKI-NORTHGRID-MAN-HEP  
UKI-SCOTGRID-DURHAM  
UKI-SCOTGRID-ECDF  
UKI-SCOTGRID-GLASGOW  
UKI-SOUTHGRID-BRIS-HEP  
UKI-SOUTHGRID-CAM-HEP  
UNIBE-ID  
UNIBE-LHEP  
ZA-WITS-CORE  
ZA\_CHPC

# Questionnaire answers (1)

1. What is the name of your site?
  - X
2. Does your site support a single LHC experiment?
  - Yes: 19
  - No: 32
3. Must your site support **other VOs** on the same resources?
  - Yes: 38
  - No: 13
4. Does your site require **classic** grid services?
  - Yes: 38
  - No: 13

# Questionnaire answers (2)

5. Consider **reduction** of the required services or phase space?
  - Yes: 39
  - No: 12
6. Might your site benefit from a repository of **OpenStack** images?
  - Yes: 27
  - No: 24
7. Might your site benefit from a repository of **Docker** containers?
  - Yes: 37
  - No: 14
8. Might your site benefit from a repository of **Puppet** modules?
  - Yes: 36
  - No: 15
9. Might your site benefit from install/configuration **wizards**?
  - Yes: 22
  - No: 29

# Questionnaire answers (3)

10. Could your site supply WNs **dedicated** to the experiment(s)?
  - Yes: 16
  - No: 35
  
11. Could your site run **VM images** supplied by WLCG or the experiments?
  - Yes: 27
  - No: 24
  
12. Could your site use **Vac-in-a-Box** with self-contained hypervisors?
  - Yes: 16
  - No: 35
  
13. Allow **remote access** to your local cloud infrastructure?
  - Yes: 12
  - No: 39
  
14. Allow **remote access** to a DMZ for the experiment(s)?
  - Yes: 16
  - No: 35

# Selected comments (1)

- Overly complex Puppet modules (DPM!) can be harmful
  - Unclear what changes are made to the system and therefore where things can go wrong
- Ansible playbooks could also be shared
- For containers consider Singularity
- Improve documentation!
  - Indexable by Google
  - Remove obsolete documentation

# Selected comments (2)

- FAX operations team should provide a VM/container and maintain it themselves
- Similar survey for lightweight storage?
- Lightweight sites may also have “lightweight” network performance → adjust workflows
- There still is “everything else” to do
  - Aircon, UPS, server room power and light, rack and node maintenance, network switching, HW procurement, OS provision, baseline testing, 24/7 monitoring, ...



# Conclusions

- Most sites require classic grid services
- Shared repositories would seem to promise the biggest gains
  - OpenStack images
  - Docker containers ←
  - Puppet modules ←
    - One repo already exists: <https://github.com/HEP-puppet>
- It would be logical to start with those
  - Not excluding other initiatives in parallel
- These will need to be community efforts
  - Contributions shall be clearly acknowledged