



Enabling Grids for E-scienceE

Accounting Portal

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- **APEL recent developments**
- **Tier2 Accounting and Reporting**
- **Status of sites**
- **Accounting by UserDN and FQAN Views**
 - User View
 - Site Admin View
 - VO Manager View
 - VO Member View
- **Future Work**
- **Demo**

- **UserDN encryption**
- **FQAN Publishing**
- **Using blah log – should be compatible with CREAM**
- **Multi-CE support**
- **SAM Tests**
- **YAIM to handle UserDN publishing**

- **User Level Accounting Delivered**
 - UserDN captured from CE log files (grid-jobmap logs)
 - APEL uses the data to build accounting records
 - Data published to GOC with on-the-fly encryption using APEL public key (1024 bit RSA)
 - At the GOC data are extracted from RGMA and stored in a Central Accounting Repository.
 - Data decrypted using APEL private key
 - User Level summary table created
 - On-the-fly encryption using EGEE Portal certificate
 - Encrypted table pushed to CESGA portal
 - Portal decrypts data and provides SSL based access to the summaries.

- **UserFQAN**

- Capture UserFQAN from grid-jobmap log on CE
- FQAN chain processed at the GOC to derive Group and Role from the primary part of the chain.
- If UserFQAN present, we can use the Group to derive the VO of the user submitted job (otherwise we use the local unix group).

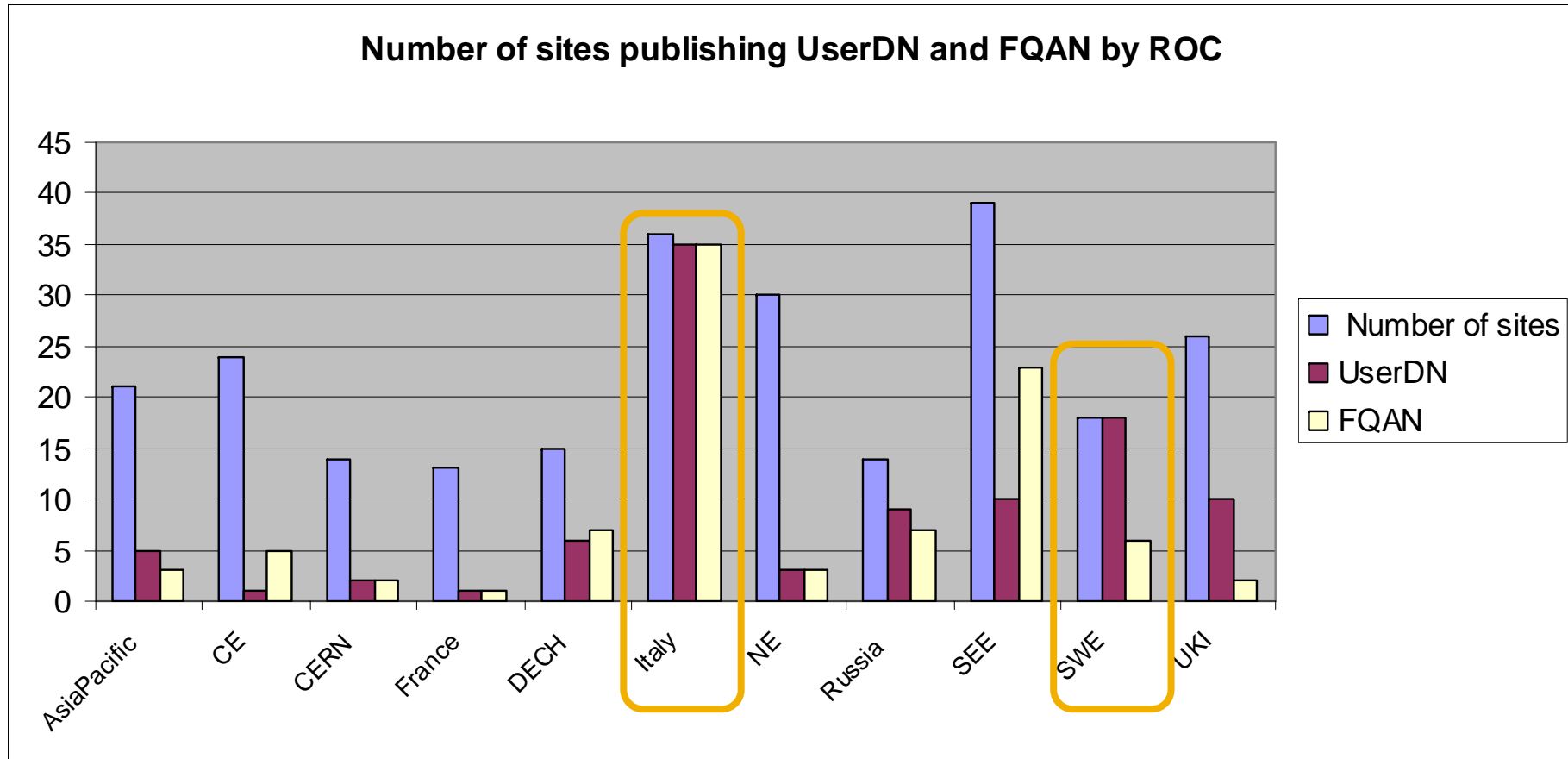
- **Structure of Tier2 Federations is currently managed manually**
 - WLCG Office sends spreadsheet which becomes a table in the GOC database.
- **Data grouped by Country and Tier2 Federation**
 - Some Tier2s are just one site.

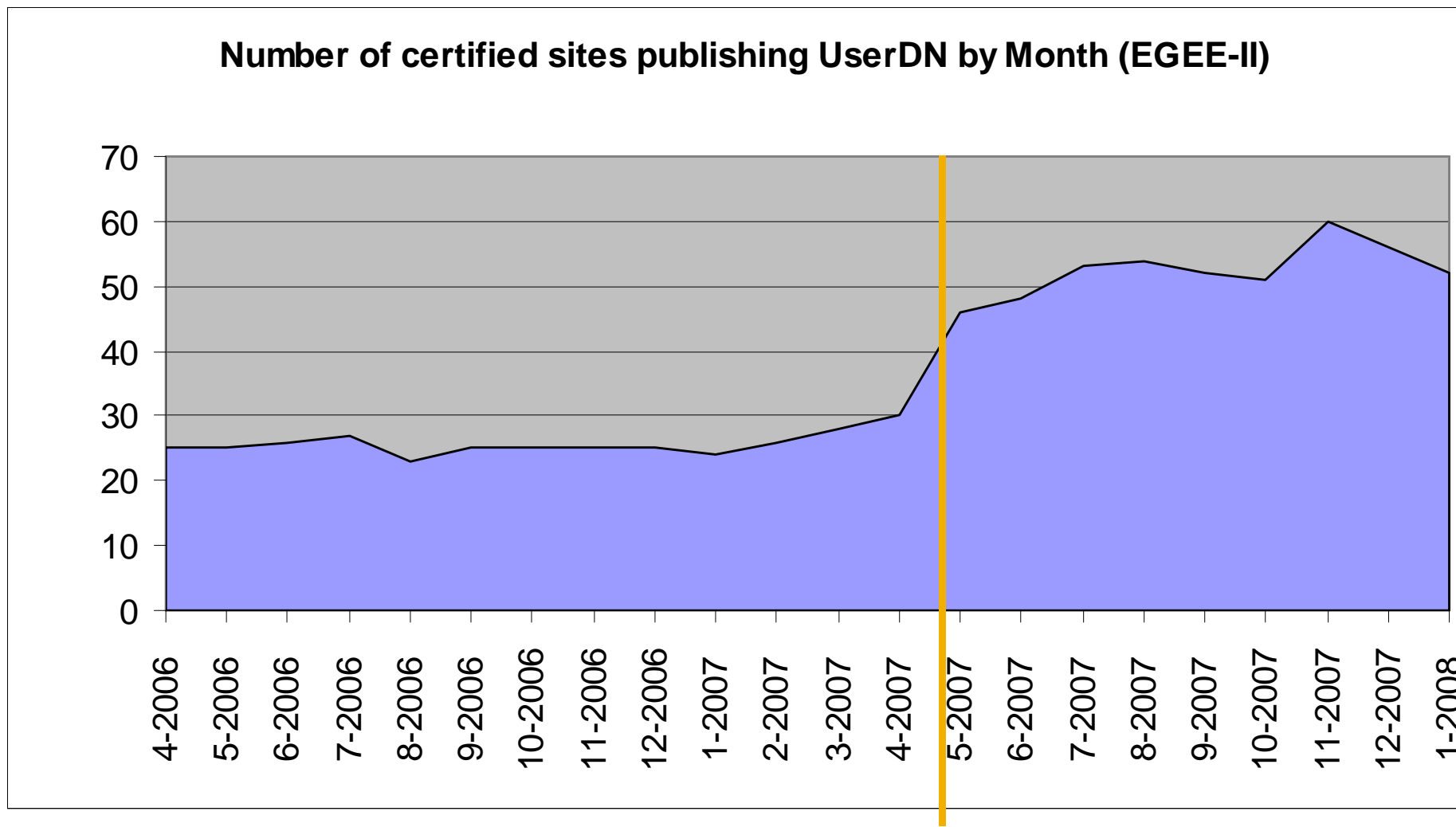
http://www3.egee.cesga.es/gridsite/accounting/CESGA/tier2_view.html

- **CESGA developed a downloadable report with results from APEL to match the WLCG manual report.**
 - WLCG office use it and add some information manually.

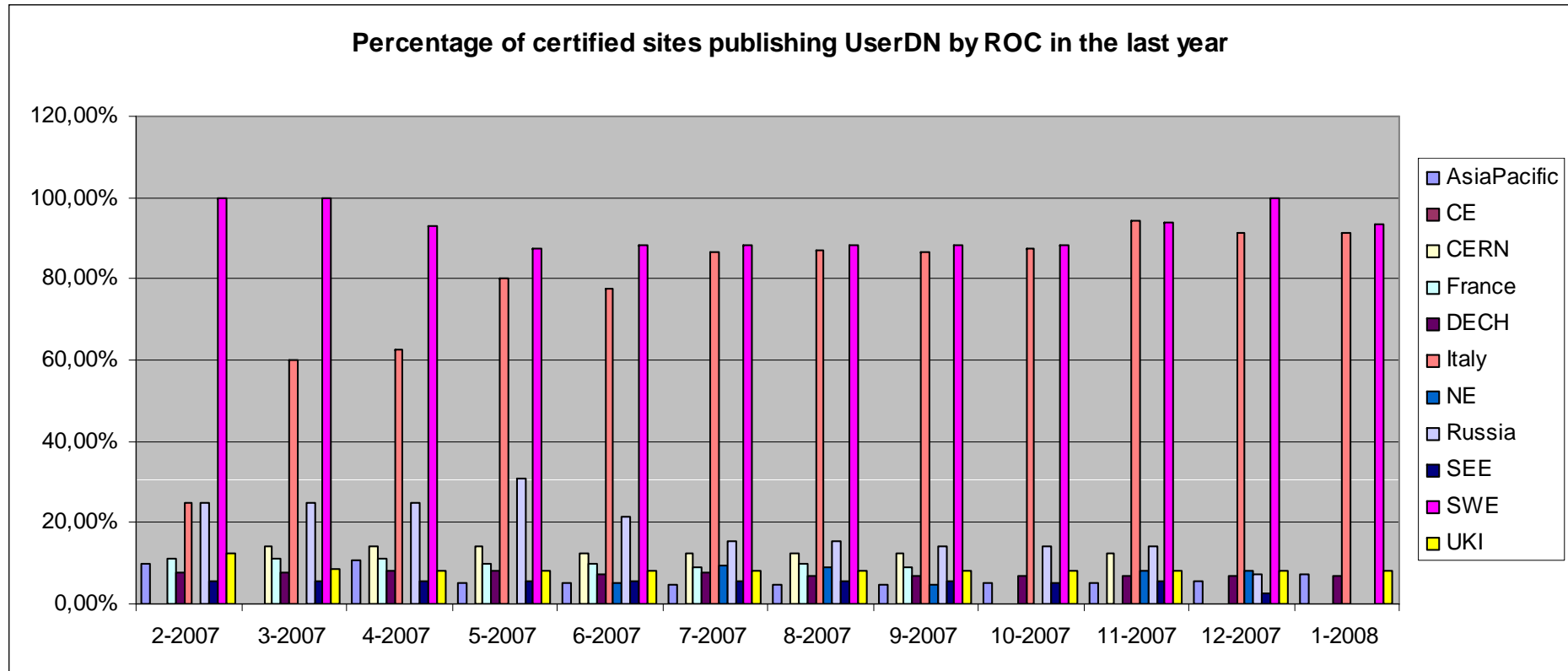
- **WLCG Tier1 Report**
 - Provides cpu input to the monthly report.
 - Disk, tape, and non-grid are still manual.
- **Report per Country (Tier2 sites)**
- **WLCG Tier2 Report**
 - Showing the “Tier2 MOU SI2K Pledge” against the actual usage delivered.
 - We have detected a problem with sites that belong to several Tier2s: *DESY-HH, DESY-ZN, INFN-TORINO, INFN-BARI, INFN-LNL-2*.
 - These sites have published data corresponding to several VOs.
 - Many other T2s support VOs other than those they have pledged resources to
 - We could associate each site with the corresponding VOs if you provide us the necessary information (for example, a report)
 - <http://www3.egee.cesga.es/gridsite/accounting/CESGA/reptier2.html>

Number of sites publishing UserDN and FQAN by ROC

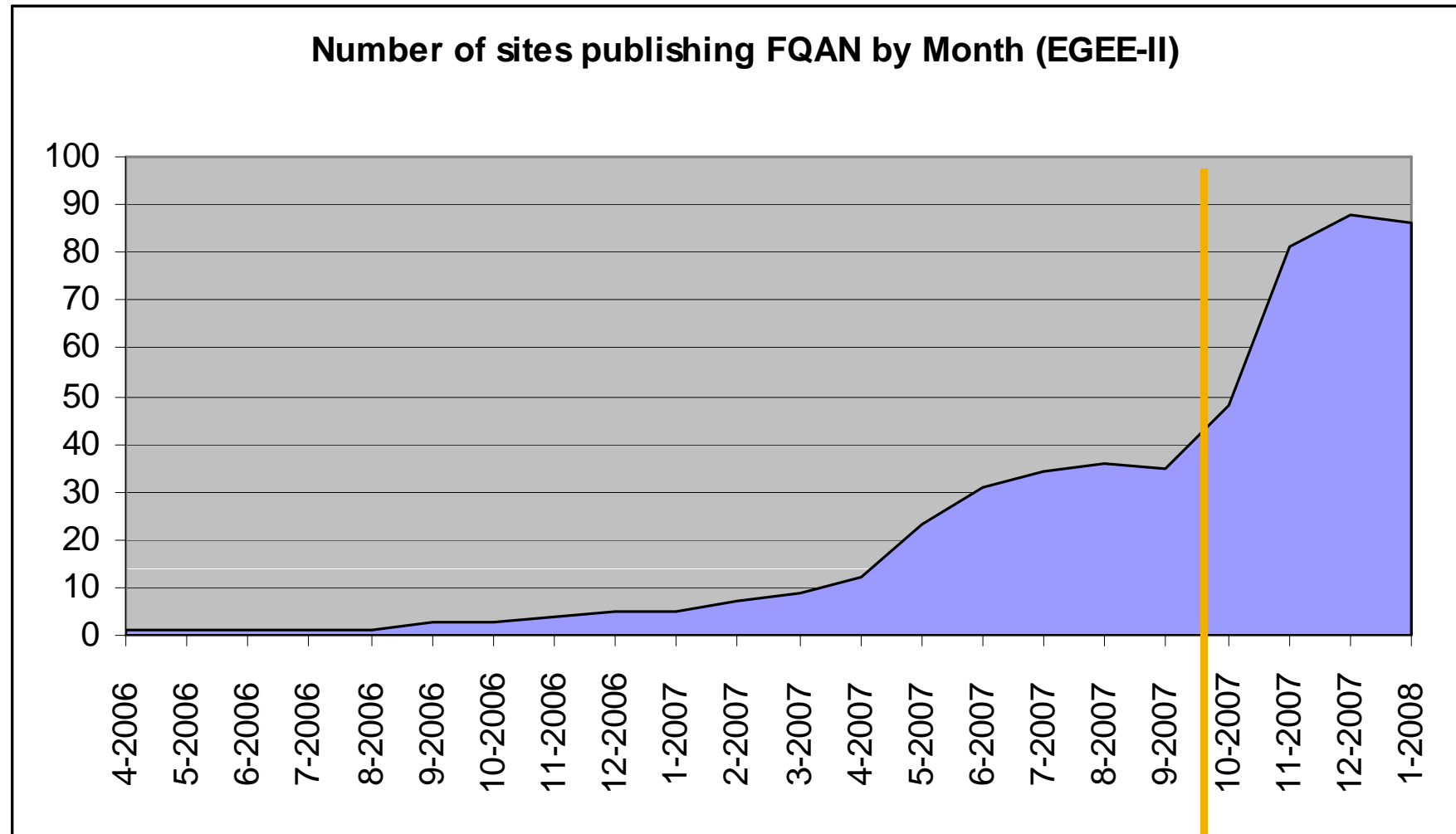




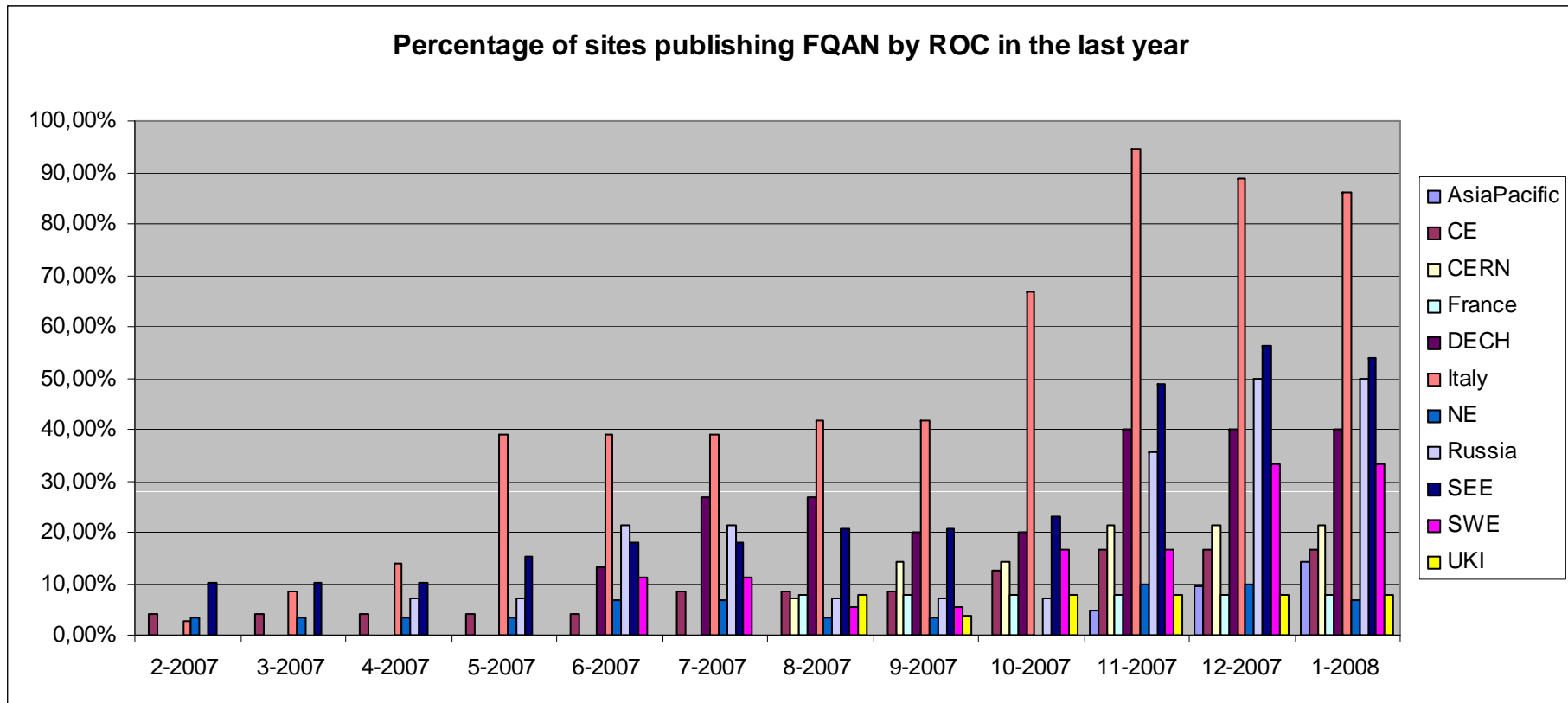
Italian Sites start to publish UserDN



In SWE federation we have published almost all the records with the UserDN information since the beginning of EGEE-I



LCG-CE with Patch 898??



- **OSG and NorduGrid sites don't use APEL to publish the accounting data so they don't publish UserDN and FQAN information.**
- **NIKHEF publishing their own encrypted UserDN strings**
 - Example LCGUserID: HPfh56sbc3AYKDn1Yusxgg
 - Can only attribute usage to the VO
- **INFN use the DGAS sensor and then publish into the APEL Portal**
 - Others could do the same.
- **Will share current plans with OSG and NorduGrid.**

- **Tier1 sites publishing UserDN information:**
 - CERN-PROD, FZK-LCG2, INFN-T1, NIKHEF-ELPROD, pic, RAL-LCG2, Taiwan-LCG2, TRIUMF-LCG2
 - 8/14 sites (57%)
 - This number is high considering we don't have a policy document controlling access yet.
- **Tier1 sites publishing FQAN information:**
 - CERN-PROD, INFN-T1, pic
 - 3/14 sites (21%)

Tier2 sites publishing UserDN information:

<u>Country</u>	<u>Sites</u>
France	GRIF
Germany	DESY-HH, GSI-LCG2, wuppertalprod
India	INDIACMS-TIFR
Israel	TAU-LCG2
Italy	INFN-BARI , INFN-CATANIA, INFN-FRASCATI, INFN-LNL-2, INFN-MILANO, INFN-NAPOLI-ATLAS, INFN-PISA, INFN-ROMA1, INFN-ROMA1-CMS, INFN-TORINO
Pakistan	PAKGRID-LCG2
Portugal	LIP-Coimbra, LiP-Lisbon
Romania	RO-01-ICI
Russian Fed.	ITEP, JINR-LCG2, ru-Moscow-SINP-LCG2, RU-Protvino-IHEP, RU-SPbSU, Ru-Troitsk-INR-LCG2
Spain	CIEMAT-LCG2, ifae, IFCA-LCG2, IFIC-LCG2, UAM-LCG2, UB-LCG2, USC-LCG2
Switzerland	CSCS-LCG2
UK	ScotGRID-Edinburgh, UKI-LT2-IC-HEP, UKI-NORTHGRID-LANCS-HEP, UKI-NORTHGRID-MAN-HEP, UKI-NORTHGRID-SHEF-HEP, UKI-SCOTGRID-DURHAM, UKI-SOUTHGRID-BHAM-HEP, UKI-SOUTHGRID-OX-HEP, UKI-SOUTHGRID-RALPP

43/110 sites (39%) but we have never formally asked Tier2s to publish.

Tier2 sites publishing FQAN information:

<u>Country</u>	<u>Sites</u>
Austria	HEPHY-UIBK
China	BEIJING-LCG2
France	IN2P3-SUBATECH
Germany	DESY-HH, DESY-ZN
Italy	INFN-BARI , INFN-CATANIA, INFN-FRASCATI, INFN-LNL-2, INFN-MILANO, INFN-NAPOLI-ATLAS, INFN-PISA, INFN-ROMA1, INFN-ROMA1-CMS, INFN-TORINO
Japan	TOKYO-LCG2
Pakistan	NCP-LCG2, PAKGRID-LCG2
Poland	CYFRONET-LCG2
Romania	RO-11-NIPNE
Russian Fed.	ITEP, ru-Moscow-SINP-LCG2, RU-SPbSU, Ru-Troitsk-INR-LCG2
Spain	CIEMAT-LCG2, ifae, USC-LCG2
Switzerland	CSCS-LCG2
UK	UKI-NORTHGRID-LANCS-HEP, UKI-SOUTHGRID-CAM-HEP

30/110 sites (27%)

Why sites don't publish UserDN?

- To publish the UserDN, sites have to set the *publishGlobalUserName* option to “yes”.
- Some sites may wish to suppress the DN for reasons of *personal privacy*. Once they have a Policy, WLCG may mandate its sites to publish
- By default, the DN is suppressed from publication.
- Addition of new variable in YAIM (testing in PPS): *APEL_PUBLISH_USER_DN*. If it is set to “yes”, it will enable UserDN encryption. *The default is “no”.*
- **Normally, sites don't change the default values, so if we want to obtain the UserDN information the default value should be set to “yes”.**

Why sites don't publish FQAN?

- **APEL misconfiguration: Sites use the deprecated option GkLogProcessor instead of the BlahdLogProcessor option.**
 - LCG-CEs that implement the Accounting Log File (Savannah Patch #898) no longer need to process the GateKeeper and Messages Logs.
 - The GK/Msgs log functionality is kept in order to maintain backwards compatibility.
- **There are sites that don't have the Accounting Log Files (`/opt/edg/var/gatekeeper/grid-jobmap_YYYYMMDD`) in the CE.**

[GLOBAL View](#)[VO MANAGER View](#)[VO MEMBER View](#)[SITE ADMIN View](#)[USER View](#)[REPORTS](#)[LINKS](#)

- Apart of the **Global View** and the **Reports** tab, 4 new views using the **UserDN** and **FQAN** information are in development:
 - User View.
 - Site Admin View.
 - VO Manager View.
 - VO Member View.

- **Statistics of usage for all jobs belonging to the UserDN (CPU, WCT, distribution of usage between ROCs and sites, ...)**
- **What happens if the User changes their UserDN? How does the User access their data if they no longer have the old certificate? Do we need a mechanism to track the UserDN history?**
- **We could associate the old certificates with the new certificate. Example:**
 - New certificate:
 - /DC=es/DC=irisgrid/O=cesga/CN=Pablo-Rey
 - Old certificates:
 - /C=ES/O=DATAGRID-ES/O=CESGA/CN=Pablo Rey Mayo
 - /C=ES/O=DATAGRID-ES/O=CESGA/CN=Pablo Rey Mayo cert001

- This view let a Site Administrator to access to statistics of usage in its sites: Usage for Top 10 Users (Anonomised UserDN), area of pie shows the Total Usage by the SITE and the contribution of each of the Top 10 Users and Others, average Wall Clock Time (WCT) for all jobs belonging to each User, ...
- The list of site administrators is taken from the *GOADB Portal*.

- Each VO Manager could access to statistics of usage in its VO: Usage for Top 10 Users (Anonomised UserDN), area of pie shows the Total Usage by the VO and the contribution of each of the Top 10 Users and Others, average Wall Clock Time (WCT) for all jobs belonging to each User, ...
- The list of VO managers is taken from the VO Identity Cards of the CIC Portal. The Managers and Deputies are taken.
- APG requested CIC a new field for resource manager in the VO Card.

- This View will allow to have an overview of the status of the VO at a lower level of detail than the VO Manager View (grouping by VOMS roles and groups).
- The list of VO members is taken from the VOMS Servers registered in the VO Identity Cards of the CIC Portal.
- We use a script (voms2users) based on the voms2gacl script wrote by Steve Traylen.

- **APEL**
 - Accounting of local work (non-grid)
 - MPI jobs
 - Alternative transport layer
- **Portal**
 - VO-based structures – eg ATLAS Tier2 Cloud



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