**Recommendations to improve the Applications Database   
and Operations Portal services to better serve scientific communities**

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In April 2012 EGI.eu opened an Application Expert secondment position for the NGIs. In May 2012 Jelena Tamuliené from the Lithuanian NGI has been selected for the position and she worked in the EGI.eu User Community Support Team between July-September. Jelena’s scientific background is in computational chemistry and one of her first tasks in the secondment position was to review the applications and tools that the NGIs offer in the EGI Applications Database (AppDB) for ‘Computational Chemistry and Material Sciences’ communities and to make suggestions on improving these applications, as well as the AppDB service itself for such communities. This document reports about the feedback that Jelena provided on the AppDB service to the EGI.eu User Community Support Team and describes recommendations by the team for the further implementation of the AppDB service as response to the feedback. Although Jelena’s AppDB review was made from the ‘Computational Chemistry and Material Sciences’ perspective, her remarks could be made by the representative of any other scientific disciplines and therefore the improvements suggested in the document can help EGI improve the attractiveness of AppDB for researchers in general.

In the future similar AppDB reviews should be made by other types of users, for example by software developers (software providers and integrators) and by dissemination/scientific writers.

1. Feedback:   
   AppDB presents applications, tools and Virtual Organisations (VO) in the highest level of the menu hierarchy. At the same time these services are not equally relevant for a scientific user:
   * Applications (e.g. Gaussian, Gromacs) are meaningful services to those researchers who want to use gridified applications.
   * Tools are meaningful services to those researchers who want to gridify custom applications.
   * VOs have secondary relevance in either cases, because the term ‘VO’ is not meaningful for a scientific user (VO is specific to grid in the AppDB context) and VO membership is may not even needed to use an application or a tool.

Recommendation:

1. Put software into the center of AppDB. (software in the broadest sense. Any type). Any other entity is ‘just’ meta-information about software the system stores. Meta-information that can be used to categorise, search, know more about the software. The software and the meta-information should not be at the same level in the menus. (See how iPods use meta-information about an MP3 file for search and categorisation. For example Artists and Music are not at the same level in the menu in iPod.)
2. Feedback:   
   Information about the availability of a particular software to use is not available in software profiles. For those applications that are available for third party access (by download or as an online service) access information and conditions are often missing.

Recommendation:

1. Software profiles in AppDB need to be extended with information about software availability and access conditions:
   1. Available as an online service (no need to install, we operate it for you)
   2. Available for download and install (so you operate it)
   3. Not available for external users

For option a the method of access can be one or more of the following:

* + - * 1. Loginname and password required

EGI SSO

Other

* + - * 1. Membership in an EGI Virtual Organisation is required

VO X

VO Y ...

* + - * 1. A personal grid certificate is required

When an application profile is displayed, the availability and method of access must be very visible and AppDB should simplify getting access (especially to online services) as much as possible – e.g. by proving link to EGI SSO; link to the registration page of VO X, VO Y, ...; link to the visitor’s CA (based on his/her IP).

1. Feedback:   
   One of the most important information about a VO for potential users is whether the VO can accept new members or not, and, if it does then what are the conditions to join and how can one join? This information is not available in either the Applications Database, or in the Operations Portal. It is available for some VOs on their own website, but getting to this information is often complicated or impossible.

Recommendations:

1. The Operations Portal need to store information about the conditions and the methods of joining the VO. Related fields need to be added to the VO ID Cards, and a campaign needs to be run with the VO Managers to fill and keep the new fields up to date.
2. If a VO is not open for external users then the AppDB should display the same information (i.e. Not available for external users) about every application that runs on that VO and only on that VO.
3. Feedback:   
   The search does not seem to search in the discipline field, causing confusion to those who want to get a list of for example every software that has something to do with computational chemistry. These users will see only those software that include the word ‘Computational chemistry’ in their description but will not see those that are under the ‘Computational Chemistry and Material Sciences’ category without the explicit mention of this word in the description.

Recommendation:

1. Extend the search to the discipline field and clarify in the manual how search works.
2. Feedback:   
   Those software that has anything but not “Production” status in their profile makes the user question the relevance of the software for use. Software should become production as soon as possible, the time that software spend in non-production statuses should be minimal.

Recommendation:

1. AppDB should send reminders to owners of application that are not in production status and remind them the importance of publishing production applications in AppDB, asking them to update the status as soon as possible.
2. Feedback:   
   A software can have various different contacts being associated with it in AppDB. (For example developer, scientific coordinator, etc.) The meaning of these roles is not evident for a user, and the most important contact – the person who should be asked if one wants to get access to the software – is not highlighted.

Recommendation:

1. Review and rethink the AppDB user role structure and the software contact structure. Merge these as much as possible and use categories that are meaningful for external users and are independent from EGI-specific roles (e.g. Do not display NIL as a role, display national contact instead).
2. Feedback:   
   The meaning of ‘related countries’ in software profiles is fuzzy. What does ‘related’ mean in this context? One can easily associate to the country where the software can be used, assuming that users from other countries are not allowed to access the software. This assumption is often false and related means that either the developers are from the ‘related countries’ or there are existing users in the ‘related countries’, but users from other countries are welcome to join.

Recommendation:

1. The most important information to a user about countries of an software are:

* What are the countries where the software can be used? 🡪 Can I use it or not?
* What are the countries where software-specific user support exists? 🡪 Who could I talk to in case I have a question?
* What are the countries where the software is already used? 🡪 Who could provide feedback about his/her experience with the software?

The different types of country relationships should be distinguished on the software profile page instead of blending these into the single ‘related countries’ relationship.

1. Feedback:   
   The contact information part in some of the personal profiles are not filled, making it impossible to get in touch with the person for example to ask for access, clarification or feedback concerning the software they are linked to. (Examples: A. Zengin, P. Orviz, O Gervasi)

Recommendation:

1. Identify all those personal profiles that have incomplete contact information and using Google, NILs and institutional EGI contact points get in touch with them and ask them to fill the contact part or delegate the ownership of the software to a colleague of them.
2. Feedback:   
   Some of the VOs that are listed in AppDB have no software associated with them. Having these listed confuses the user.

Recommendation:

1. Do not display VOs that have no software associated with them.
2. Feedback:   
   Some of the stored items do not have their ‘Subdiscipline’ field filled and for these their profile include a “Subdisciplines: “ line. This is misleading as one thinks that something is missing here, so it’s a bug in the system.

Recommendation:

1. For those software that have no subdiscipline specified for them do not display this field, or display it as “Subdisciplines: Not specified” .