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Experiences and Design of the New EGI Metrics Portal

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The EGI Metrics Portal is an important tool for project management that aggregates a large number of quality and health metrics from all tasks within EGI. These metrics measure not only the status of the infrastructure, but also the activity of all people involved on the project. Some of these metrics are conflated from many sources, and some are manual and updated by activity and task leaders.

Initially, a PHP portal was spawned from the Accounting Portal existing codebase, but its non-optimal MVC separation, the overhead of PHP development and a perceived complexity on requirement capture and evolution was viewed as an obstacle. Thus, a new Python and Django-based solution was postulated.

The Django framework adds a well documented, community-supported and solid base for developing web applications that makes possible rapid prototyping and shorter development cycles, which reduce development risk considerably.

It also is based on the DRY (Don't Repeat Yourself) tenet, which avoids code and model duplication. In this sense, many aspects of the new Metrics Portal are model-derived, and, using appropriate tools, model changes can be made in mere minutes. After each model change, conforming SQL tables and Python objects are created, and views are designed to instantiate forms on the fly based on the new model.

This allowed to accelerate the development of the Portal so that all manual metrics were introduced in one step, instead of in several development cycles.

The support of manual metrics mandated the implementation of an authorization model. Since much of EGI's user auth is based on certificates, the portal first checks for user certification. Since there are users without one, though, authentication for the LDAP-based SSO (Single Sign On) EGI login is automatically used if the user does not provide a certificate.

Finally, the resulting portal is modular and layered, and all this layers can be separated into several machines and distributed for redundancy and availability.

Duration (90min sessions)

30min

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