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Director of SURFsara

'On 1 January 2013, SARA joined the SURF family and we changed our name to SURFsara. SURFsara's activities - high-performance computing (HPC), data storage, visualisation, cloud and eScience support - are now anchored in SURF, the ICT cooperative alliance serving higher education and research.

The Netherlands occupies a unique position, with an EDU sector that is one of the world's most well-organised communities. Cooperation between the institutions involved is second nature and knowledge-sharing is widespread. The logical next step

is to also start sharing at least some of the ICT infrastructure and human resources. SURF is therefore now leading an effort to set up a structure with this capability, envisioned as a sort of virtual distributed computing centre. A cloud of this federative nature has an added benefit in that it is more sustainable. Without raising energy consumption, you can increase the amount of time your equipment is in use, and do so on a permanent basis, because the cloud gives you the reserve capacity you need to cater for the peaks. Plus, it enables you to make better use of your human capital.'

Testing in the cloud

DIGITAL TESTING CAN IMPROVE THE QUALITY OF HIGHER EDUCATION, REDUCE THE WORKLOAD OF LECTURERS AND IMPROVE STUDENT STUDY PERFORMANCE. WHAT'S MORE, FACILITIES ENABLING DIGITAL TESTING IN THE CLOUD MEAN INSTITUTIONS CAN COOPERATE. THIS AMBITION IS BEING PURSUED BY SURF AND THE INSTITUTIONS IN THE TESTING AND TEST-DRIVE LEARNING PROGRAMME.

'Interest in the use of digital testing systems and tools is increasing sharply', according to Chris Tils, 'although as yet their use is pretty limited'. Tils is one of the project leaders in the Testing and Test-Drive Learning (TTL) programme launched in 2010. 'One of the factors driving this trend is developments in higher professional education, such as the Bruijn Committee's appeal for more cross-institutional cooperation in testing and examining.'

Detecting plagiarism

Digital testing systems and tools come in all shapes and sizes. Some cover the entire testing cycle: providing support for the writing of test questions and compilation of tests by lecturers, the sitting of tests by students, as well as the checking and evaluation of results. Others can be used in just one phase, for example to detect plagiarism in essays, to give students focused feedback or to stock and manage test banks (databases of test questions).

Additional testing tools are also being developed within the TTL programme, with institutions engaged in small-scale projects to develop testing tools that they themselves need and that are not yet commercially available. Take STEVIE, for example, an online system that interprets the statistical analysis of a test and converts the findings into language a lecturer can grasp. Or a resource that protects Windows PCs run by institutions from the outside world, thereby ensuring the security of the digital testing of, say, interim essay-based tests.

More extensive test banks

More and more suppliers are making their testing systems and tools available as cloud services. 'This has all kinds of advantages', says Chris Tils. 'It makes it easier for test banks to

be stocked by multiple institutions. Current testing systems don't support this, so we hope that the cloud can offer a solution to fill this gap. When test banks are stocked by more than one institution, it raises the quality of the test questions and reduces the lecturer workload. Moreover, it results in much bigger test banks that students can draw on to practice. In doing this, they gain a clearer sense of how they are performing academically, which has the knock-on effect of improving study progress. Another possibility is that study programmes at different research universities and universities of applied sciences could work together to compile tests in the cloud and could set them at the same time.'

Some buts

Having said this, Tils is quick to point out that there are some 'buts' to testing in the cloud. 'The first is that you have to be absolutely certain that a test service is secure and cannot be hacked. In addition, the institutions are still rather inexperienced when it comes to making and setting tests in the cloud. Will this deliver the anticipated gains in terms of quality and time? Another pertinent question is whether it is worthwhile for programmes and financially responsible for institutions to start paying for each test sat by students as opposed to the fixed sum of a site licence.' In order to address these issues, over the next two years institutions will gain experience within the TTL programme with cloud services provided by commercial providers and with the tools used at other institutions. After that, SURF plans to make the cloud services available via SURFconext.

For more information about the TTL programme and about digital testing, visit www.surf.nl/toetsen and www.platformdigitaaltoetsen.nl. (in Dutch)



Positive reception for legal framework for standards

The SURF-taskforce Cloud has taken the initiative to compile 'ten commandments for cloud computing' - basically, essential requirements in matters pertaining to cloud data such as privacy, confidentiality, property and availability. Now, the aim is for all the higher education institutions to endorse and apply these conditions. 'All the studies that SURF has conducted and commissioned in this field over the past two years have been incorporated in these stipulations', says Evelijn Jeunink, legal advisor for SURFnet. The basic structure is provided by the 'Legal Framework for Standards, HE Cloud Services'. This document was compiled last autumn by Van Doorne Advocaten and has been positively received by the lawyers working for the higher education institutions. Evelijn Jeunink: 'The institutions are happy with the initiative. They see these stipulations as providing excellent support for the agreements they are concluding with cloud suppliers.' Other elements are the vision on cloud computing and data protection issued by the Dutch Data Protection Authority (CBP) and the Institute for Information Law's report on the position of higher education institutions with regard to laws and regulations on access to cloud data. The next step is to refine the stipulations in response to input from lawyers working for the institutions. SURFmarket will incorporate these provisions in its supplier contracts. The services offered by SURFnet will also adopt the framework for standards.