

# SeLCont

## GÉANT AND NETMODE LAB MAINTAINING THE SECURITY OF E-LEARNING CONTENT

DESIGNING AND SPECIFYING CLOUD BASED SYSTEMS CAN BE COMPLEX. THE GÉANT CLOUDS TEAM SUPPORTED NETMODE LAB IN THE IMPLEMENTATION OF THE SeLCont E-LEARNING SYSTEM.



**W**ith the growth in distance and e-learning around the world it is vital that institutions provide their students with easy-to-use ways to access lecture content and materials.

However until recently the creation of on-line content required either expensive equipment in the lecture rooms or the need for substantial post-processing to synchronise the audio and video of the lecturer with the presentation materials. This increased costs and also used valuable time that should be used for teaching or research.

SeLCont, developed in the NETMODE laboratory, is an easy to use toolkit with minimal post-processing effort and no special installation requirements from lecture rooms. The system provides students with a synchronised lecture room experience where they can watch or re-watch lectures. The content is dynamically adjusted to any user browser (laptop, desktop, tablet, smart phone) running Windows, Android and iOS.

The SeLCont software was developed by the NETMODE Lab and is available under the GNU General Public License:  
<https://github.com/netmode/selcont>

With any web based service it is vital to ensure the security and integrity of data and content shared. To support this, NETMODE used the GÉANT Data Classification tool to classify course content in the SeLCont toolkit.

### 1 THE CHALLENGE

To ensure SeLCont data is managed securely and in accordance with GDPR requirements.

### 2 THE SOLUTION

The Data Classification Tool helped the NETMODE lab identify potential areas of concern regarding content used in the SeLCont toolkit, it is being applied and tested by in an integrated environment with other learning technology platforms.

### 3 KEY BENEFITS

The data classification tool guides the user through the process of identifying the Confidentiality, Integrity, Accessibility and Storage requirements of the data to help design and specify the systems correctly.

## ABOUT THE GÉANT DATA CLASSIFICATION TOOL

To help organisations plan cloud services, the GÉANT Data Classification Tool has been created to help institutions that use cloud-based computation solutions assess data sensitivity, and criticality, and to estimate the risks of placing data on the cloud. This is a critical component of General Data Protection Regulation (GDPR) compliance, and is an important indicator of whether data can, or should, be migrated to a cloud-based platform.

In accordance with the GÉANT guidelines for information classification in higher education, there are three levels of risk for data:



- Data for public use
- Loss of confidentiality, integrity, or availability of the data or system has no significant impact



- Personally Identifiable data
- Data is not generally available to the public
- Loss of the data or system could have a mildly adverse impact



- Sensitive (Personally Identifiable) data
- Loss of the data or system could have a significant adverse impact on our mission, safety, finances or reputation.

## ABOUT NETMODE LAB:

The NETwork Management & Optimal DEsign Laboratory ([www.netmode.ntua.gr](http://www.netmode.ntua.gr)), was established within the School of Electrical & Computer Engineering of the National Technical University of Athens (NTUA) and is affiliated with Computer Systems (ICCS) at NTUA and the Institute of Accelerating Systems & Applications (IASA) of the University of Athens (UoA) & NTUA.

## NETMODE RESEARCH ACTIVITIES

NETMODE's interests and areas of expertise focus on management, design and experimentation of heterogeneous broadband networks, based on evolving Future Internet technologies. NETMODE also hosts the PlanetLab Site for NTUA, with facilities affiliated with PlanetLab Europe part of the federation, administered by UPMC-Sorbonne Universités.

## GÉANT CLOUD SERVICES

The GÉANT Cloud Services initiative is focused on assisting National Research and Education Networks (NRENs) and higher education and research organisations to become more agile, as well as provide users with the right mix and range of IT cloud-based services and products that meet their needs and are uniquely suited to the community's requirements. This means developing and/or acquiring fully interoperable solutions based on:

- Security, privacy and confidentiality.
- Reliability, availability, data location and replication.
- Diverse choice from a large selection of services.
- Economic sustainability.

GÉANT has developed a range of resources to support NRENs in cloud adoption and take-up.



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