Tárgytematika / Course Description
Cloud Computing

GKNM_TATA051

Tárgyfelelős neve /
Teacher's name: dr. Kovács Ákos

Beszámolási forma /
Assesment: Folyamatos számonkérés

Tárgy heti óraszáma /
Teaching hours(week): 2/0/2

Félév / Semester: 2024/25/2

Tárgy féléves óraszáma /
Teaching hours(sem.): 0/0/0

OKTATÁS CÉLJA / AIM OF THE COURSE

During the semester, students can get acquainted with the leading virtualization solutions, be it computer, application or display solutions. They can learn the logical division and management of resources. After the theoretical foundation, the subject provides insight into the planning and scheduling tasks of large-scale enterprise virtualization systems. It presents the solution options for virtualization organizational problems.

We recommend the subject to those who want to learn about today's popular system engineering solutions and virtualization, as well as the operation of Cloud Computing systems.

TANTÁRGY TARTALMA / DESCRIPTION

Virtualization is a technology that allows multiple operating systems to run concurrently on a single physical machine by abstracting the underlying hardware. High Performance Computing (HPC) leverages this technology to efficiently manage complex calculations and large-scale simulations that require significant processing power. Cloud computing builds on these concepts by offering scalable and on-demand access to computing resources over the internet, making it easier for businesses to manage workloads without investing in physical infrastructure. Containerization further refines these benefits by encapsulating applications and their dependencies into isolated, lightweight containers, ensuring consistent performance across different environments. This approach not only speeds up deployment but also enhances system scalability and reliability. Integrating virtualization, HPC, cloud computing, and containerization enables organizations to optimize resource allocation and reduce operational costs. Together, these technologies are transforming the computing landscape by driving efficiency, flexibility, and innovation in various industries.

SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESMENT'S METHOD

Continuous accountability

KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL

Only the prezented slides, and glossary

AJÁNLOTT IRODALOM / RECOMMENDED MATERIAL