



Teaching to educate

Educating the next generation

of computer scientists with vScaler

vScaler is now a key component of the MSc Advanced Computer Science course at Keele University, not only to teach theoretical cloud concepts, but also to apply and evaluate practical solutions for researchers.

The Goal

A powerful cloud computing research tool for student and staff experimentation.

Why vScaler?

The integration of a cloud platform directly into the teaching of cloud concepts.

The vScaler platform offers a sandbox infrastructure that supports many different types of projects for students, without the administration overheads.

vScaler provides on-demand computer resources for Big Data and computationally demanding research projects.

OBJECTIVE

Keele University sought a simple to use and cost-effective cloud based platform for research and development on the Advanced Computer Science Masters course. The objective was to find a platform that enabled High-Performance Computing (HPC), Big Data and software containers in a training environment.

“vScaler empowers teaching to educate the next generation of computer scientists, and to provide unique and on-demand resources for research.”

Dr. Misirli, Lecturer, Keele University

OUR SOLUTION

vScaler was installed onsite, providing the University with an optimised private cloud platform, with built-in application stacks to support HPC on demand and Big Data workloads. The platform supports Docker and Kubernetes which provide application portability with other container-based systems.

The platform is currently being used by academics, demonstrators, researchers and teaching staff alike, and has been directly embedded into teaching at the [School of Computing and Mathematics](#) which runs the [MSc Advanced Computer Science](#) course. One of the key modules of the course is ‘Cloud Computing’. This module teaches the fundamentals of cloud technologies such as different delivery methods,

Key Benefits

vScaler is now a key component of the MSc Advanced Computer Science course, not only to teach the theoretical cloud concepts, but also to apply and evaluate practical solutions.

The Advantages

vScaler is a single cloud solution built on open standards, with support for any software applications. The advantages include:

- Increased student satisfaction
- Reduced costs due to utilising the cloud rather than manually provisioning resources
- Better use of computer resources at the University for both staff and students

infrastructure and data mechanisms. vScaler is a key component of the MSc course, not only to teach the theoretical cloud concepts, but also to apply and evaluate practical solutions.

Lectures are supported by vScaler workshops, where students learn how to set up their own cloud infrastructure and develop software. vScaler is also part of the coursework to develop cloud applications and to critically evaluate the processes behind cloud technologies.

The platform is also used to support third year dissertation projects which may require custom requirements. Due to the variety and number of projects changing every year, vScaler is an important tool that enables the staff to provide a flexible infrastructure for students.

vScaler is also used by the staff in research projects. Computational resources required for research vary greatly based on the project and time-line. It is crucial to support the staff with appropriate resources at any given time to generate reproducible scientific data. vScaler provides a unique opportunity to utilise and distribute on-demand computational resources at the School. This resource is also used in funding applications of different projects.

ABOUT KEELE UNIVERSITY

Keele University is proud to be joint No.1 in England for Course Satisfaction in the Guardian University League Table 2019, in addition to having been ranked No.1 in England for student satisfaction in the 2018 National Student Survey, of broad-based universities. The University was also awarded Gold in the 2017 Teaching Excellence Framework.

Located in the heart of England, Keele excels in both education and research. The School of Computing and Mathematics has highly rated research in a number of areas, including computational neuroscience, software engineering, evolutionary systems, machine learning and computational intelligence, fluid dynamics and acoustics, solid dynamics and elasticity, biomechanics and biomedical engineering, pure mathematics and statistics. The School currently offers undergraduate programmes (BSc) in Computer Science and Mathematics, postgraduate programmes (MSc) in Advanced Computer Science, and two four-year undergraduate programmes in Computer Science (MComp) and Mathematics (MMath). For more information visit www.keele.ac.uk.

For More Information,

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