Virtualised Computing Architectures

Module Information

2022.01, Approved

Summary Information

Module Code	6122COMP
Formal Module Title	Virtualised Computing Architectures
Owning School	Computer Science and Mathematics
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 6
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
Computer Science and Mathematics

Learning Methods

Learning Method Type	Hours
Lecture	33
Practical	11
Seminar	11

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
SEP-CTY	CTY	September	12 Weeks

Aims and Outcomes

Aims	To provide the student with the ability to apply the methods and techniques involved in computing resource virtualisation, from individual machines to virtualised networked infrastructures

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Evaluate various forms of CPU virtualisation (language and OS level, emulators, etc.)
MLO2	2	Organise server and desktop virtualisation configuration and administration
MLO3	3	Select new capabilities to solve problems in interfacing computer system components
MLO4	4	Critically analyse the role of system virtualisation in enabling the cloud computing paradigm

Module Content

Outline Syllabus	Virtual machines and computer architectureHigh level language virtual machine architectures and implementationEmulationDynamic program optimisationProcess virtualisationMemory virtualisationInput/output virtualisationMultiprocessor virtualisationApplications and theoretical foundations to Cloud computing
Module Overview	
Additional Information	This course introduces students to virtualization and associated technologies. Students are required to set up and configure software systems for server and desktop virtualization provisioning. The theoretical concepts described and practiced in the module form the underpinnings for most modern networked computer systems.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Technology	Virtualisation Implementation	40	0	MLO1, MLO2, MLO3, MLO4
Centralised Exam	Exam	60	2	MLO1, MLO3, MLO4

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Andrew Attwood	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings