Dominic Lindsay

Contact

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Background

Cloud Computing and Orchestration Specialization, Fog Computing, Internet of Things, Operating Systems and Networking.

Experience

I am an experience Software and Performance/DevOp's Engineer. I am currently studying towards a PhD of Computer Science from Lancaster University. Here I am researching adaptive orchestration platforms, including workload analyses and architecture benchmarking.
I aim to develop a federated orchestration framework for adaptive scheduling across mobile clusters. Understanding orchestration performance metrics involves empirical analyses of scheduler and resource management policies/behaviours in real world cluster. Experimental analyses is conducted on a 100 node Kubernetes cluster I use to 'spin up' testbeds on demand.

Education

Lancaster University, PhD Computer Science — *September 2017 - Present*
Specialisation: Scheduling and Orchestration, Fog Computing and the Internet of Things

Lancaster University, MSci Software Engineering (*1st Class*) — *October 2012 - June 2016*
Specialisation: Service Orientated Architecture and Internet of Things
Dissertation: Feature Monkeys: A Composable Framework for IoT Applications

Loreto College BTEC National Extended Diploma IT Practitioner *(A*A*A*)* — *September 2010 - June 2012*

Publications

D.Lindsay, S.S.Gill, P.Garraghan - PRISM: An Experiment Framework for Straggler Analytics in Containerized Clusters — *Published*
Proceedings of the 5th International Workshop on Container Technologies and Container Clouds

D.Lindsay, S.S.Gill, P.Garraghan - The Evolution of Distributed Computing Systems: From Fundamentals to New Frontiers — *Submitted*
IEEE Annals of the History of Computing

D.Lindsay, P.Garraghan - FOMEC - Federated Orchestration for Mobile Edge Clusters — *on-going*

D.Lindsay, P.Garraghan - Workload Composition Aware Scheduling — *on-going*

S.S.Gill, **D.Lindsay**, P.Garraghan, et al - Transformative effects of IoT, Blockchain and Artificial Intelligence on cloud computing: Evolution, vision, trends and open challenges — *Published*
Internet of Things

Employment

Lancaster University, Associate Lecturer — *2017 - Present*
Providing teaching assistance including preparing and giving lectures and assistance with lab exercises.

Demopad Software, Platform Engineer — *September 2017 - January 2019*
Implementation of platform features in both embedded system and cloud platform. Development of CI/CD pipeline. Diagnosing and providing patches for bugs.

SCISYS, Software Engineer — *July 2016 - September 2017*
Worked on several projects include: IoT Tracking and Control platform, RNLI Situational Awareness Monitoring System, Seimens Design Railway Software.

Skills

C, C++, Python, GoLang, Java, R, Docker, LXC, Ansible, Puppet, Kubernetes, Traefik, Git, SVN

References

Dr Peter Garraghan ⟨p.garraghan@lancaster.ac.uk⟩
Prof Utz Roedig ⟨u.roedig@cs.ucc.ie ⟩