

DevSecOps on NeSI: A roadmap towards secure research platform

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ABSTRACT / INTRODUCTION

NeSI has started and progressed down the path of securely developing and operating bespoke research products (Flexi HPC, AGDR, Rakeiora, and others). This progress has required forward-thinking architecture while allowing for pragmatic solutions to novel challenges. Along this journey, we have progressed into a DevOps mindset of infrastructure and systems as code where possible and feasible. We are progressing towards DevSecOps to bring automated code testing and validation into our pipeline. We share some challenges and how we overcame them along with the tools, stacks, and processes we have used or want to use.

ABOUT THE AUTHOR(S)

Michael Karich

Michael Karich is Deputy Chief Information Security Officer – Research at the University of Auckland, NeSI, and UniServices. Across these roles, he strives to support and enable secure research operations across the entire data lifecycle. Before this, he held roles in HPC and cloud infrastructure, data management, and research administration.

With Computer Science and IT Operations qualifications, Michael pulls from a broad background to build and enable secure yet efficient research. He is currently focusing on the enhancement of internationally known capability through governance, staff enablement, and visibility.

Nathalie Giraudon

Nathalie Giraudon: Nathalie Giraudon holds an electrical engineering degree from ENSEEIHT, École nationale supérieure d'électrotechnique, d'électronique, d'informatique, d'hydraulique et des télécommunications (French engineering school based in Toulouse). After an exchange year to McGill University, Montreal, Canada, Nathalie has worked more

than 30 years in telecommunications industry (Nortel Networks, Tait Communications). She is passionate about system design and business analysis. With her knowledge in product research and development, she is now the product engineering lead of the Collaboration and Integration team at NeSI.