

University of Essex

Research Methods and Professional Practice January 2022

Research Proposal Outline

Project Title:

Financial Institutions' Cybersecurity for Clouds and Datacentres

Significance/Contribution to the discipline/Research Problem:

This section will cover the significance difference between on-premises data centres and the cloud and how security should ensure the applications and services are available to all authorized users. Furthermore, the section will discuss the benefits of high IT skilled engineers and the importance of security standards for security purposes.

Finally, it will discuss the security issues for the clouds to data centres connectivity.

Research Question:

- What is the difference between a data centre and cloud computing?
- Why do financial institutions use private cloud?
- Does public cloud secure for internet access?
- How to secure the cloud to datacentres connectivity?
- What are the benefits of data encryption?
- Can regulators and auditors allow financial institutions to store critical data in the cloud?

Aims and Objectives:

Cybersecurity aims to protect the networks, servers, clients data and whole infrastructure users.

Cybersecurity objectives: Confidentiality, Integrity and Availability.

Key literature related to the project:

This part will discuss access management and the control of the privileges, network protection, secure connectivity, data protection and security incident management.

Methodology/Development strategy/Research Design:

Cloud cybersecurity methodology will discuss the cybersecurity tools in the datacentre and clouds like firewalls, Antivirus software, IPAM and others.

Then will talk about the importance of keeping all cybersecurity tools up to date and covering all the latest technologies used in the infrastructure.

Ethical considerations and risk assessment:

This section will discuss how to identify security threats and any weaknesses points, then how to analyze the data and logs to get the correct outlines to avoid any future attacks on the infrastructure.

Description of artefact(s) that will be created:

Talk more about the importance of logging and monitoring systems in the financial infrastructure.

Timeline of proposed activities:

Graph to cover the work timeline for this project activities.