



Technological Challenges and Innovations in Cybersecurity and Networking Technology Program

Conference Track
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ABSTRACT

This era is posing a unique challenge to the Cybersecurity and related Engineering Technology areas, stimulated by the multifaceted technological boom expressed in accelerated globalization, digital transformation, the cloud, mobile access apps, and the Internet of Things (IoT)—where more and more everyday devices are connected to the Internet. As the use of new Internet-based technologies increase; so does the risk of theft and misuse of sensitive information. This demands the awareness of cyber-criminality and the need for cyber hygiene in corporations, small businesses, and the government. As the need for experienced cybersecurity specialists has skyrocketed in recent years and employment for positions such as that of an information security analyst are projected to grow exponentially, there is a growing trend of cybersecurity training and certificate courses throughout the nation. Henceforth, this paper discusses the importance of designing a cybersecurity technology program, key challenges faced by it, and the use of advanced and innovative technologies to be employed. We will discuss various approaches to use technological innovation especially for the advanced courses like Ethical Hacking and Network Penetration Testing and Computer Cybersecurity that include using cloud space to deploy virtual machines and labs; using VMware and the possibility of deploying Dell advanced VXR Hyperconverged System. This Software-defined architecture combines computing, storage, virtualization, management and has full stack integration with VMware Technologies. This work is funded by the U.S Department of Education and CapitalOne Foundation grants and also includes consultation with National Cyberwatch and our key partner companies in this endeavor.

KEYWORDS

Cybersecurity, Hyper converged, Virtualization, Networking.