



جامعة الإمارات العربية المتحدة
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**The College of Graduate Studies and the College of Information Technology
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Entitled

Healthcare Monitoring System Security Platform using SDN paradigm

by

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Abstract

This thesis studies the security and privacy concerns of Healthcare Monitoring System (HMS) and proposes a state-of-the-art Security Platform for HMS using the newly immersed Software Defined Network (SDN) paradigm. In this thesis, we investigate the existing HMS architecture and the relevant solutions proposed for both security and privacy concerns in the literature today. Moreover, we develop a new HMS Security Integration Framework, in the form of a security platform for securing HMS. Finally, we run a comparison between the existing architectures and our proposed framework to highlight the added value of our proposed architecture. Our proposed integration framework eliminates the dependency on specific Software or vendor for different security systems. Also, using the SDN paradigm as communication platform allows the architecture to benefit from all the functional and security applications and services provided by SDN platform. To our knowledge, no other research in the literature today has considered all security and privacy concerns for HMS. Our proposed architecture is the first attempt in that direction.

Keywords: HMS, SDN, Security, Privacy, Healthcare