

Internet of Things (IoT) have become the most pervasive and largest computing platform nowadays. Security plays a more and more important role because of the nature of IoT systems that deal with people's daily life. IoT systems are often composed of low capable devices, which are devices with low computational capability, limited energy supply, or small memory size, some traditional security solutions, such as asymmetric key based protocols and IP-based solutions, cannot be effectively applied to IoT systems. Other factors, such as the tight coupling between the cyber systems and the physical world, the heterogeneity of IoT devices and IoT communication protocols, and the extremely large system scale, make it more challenging to secure IoT systems. Within the context of a general IoT system architecture, this paper investigates special security issues, identifies new challenges, and explores alternative designs of deploying security solutions.