**Abstract**: Web-based applications in various domains, such as shopping, entertainment, business collaboration, and social networking, are increasingly based on the use of remote resources and services. In such a scenario, digital identity management technology is fundamental to protect user privacy and underpin accountability in transactions and interactions, and comply with regulatory controls. In this tutorial, you discover key concepts and broad knowledge of the different areas of Identity Management Systems (IdMS). The first part of the tutorial describes the history and current trends of IdMS, identity lifecycle and implementation challenges. The second part addresses standards, industry initiatives, and open source and commercial solutions. In the third part, you will be guide through a step-by-step guide to install, configure cross-domain single sign on, distributed authentication and two-factor authentication. We conclude the tutorial with open research challenges on how Internet of Things will redefine identity management systems to encompass all identities, regardless of whether it is a person, software or physical device.

## Bio:



Youakim BADR, Ph.D., joined the faculty of the National Institute of Applied Sciences, France (formally INSA-Lyon) as Associate Professor of Computer Science in 2004. Along the way of his research activities, he has worked extensively in the area of service computing and information security. His research interests lie in designing and implementing secured IT-enabled services in a socio-technical context. In particular, he focuses on security challenges in decentralized domains and dynamic

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