

Micro-Id-Gym: Identity Management Workouts with Container-Based Microservices

Andrea Bisegna¹, Roberto Carbone¹, Ivan Martini², Valentina Odorizzi², Giulio Pellizzari², Silvio Ranise¹

¹ Security & Trust, FBK, Trento, Italy, e-mail: a.bisegna@fbk.eu, carbone@fbk.eu, ranise@fbk.eu

² University of Trento, Trento, Italy, e-mail: ivan.martini@studenti.unitn.it, valentina.odorizzi@studenti.unitn.it, giulio.pellizzari@studenti.unitn.it

Abstract

Identity Management (IdM) solutions are increasingly important for building trust in current and future digital ecosystems. Unfortunately, not only their secure deployment but even their usage are non-trivial activities that require a good level of security awareness. For this, we introduce Micro-Id-Gym, an easy to configure training environment in which users can develop hands-on experiences on how IdM solutions work and better understand the underlying security issues.

Index terms: Identity Management, Micro-Id-Gym

References:

- [1]. Armando, A., Carbone, R., Compagna, L., Cuellar, J., Tobarra, L.: Formal Analysis of SAML 2.0 Web Browser Single Sign-on: Breaking the SAML-based Single Sign-on for Google Apps. In: FMSE '08. ACM, New York, NY, USA (2008).
- [2]. Armando, A., Carbone, R., Compagna, L., Cuéllar, J., Pellegrino, G., Sorniotti, A.: An Authentication Flaw in Browser-based Single Sign-On Protocols: Impact and Remediations. Computers & Security 33, 41 – 58 (2013).
- [3]. Engelbertz, N., Erinola, N., Herring, D., Somorovsky, J., Mladenov, V., Schwenk, J.: Security Analysis of eIDAS—The Cross-Country Authentication Scheme in Europe. In: 12th USENIX Workshop on Offensive Technologies (WOOT 18) (2018).
- [4]. Hardt, D.: The OAuth 2.0 Authorization Framework (2012), IETF.
- [5]. Mladenov, V.: On the Security of Single Sign-On. Ph.D. thesis, Ruhr-Universität Bochum (2017).
- [6]. OASIS: SAML V2.0 Tech. Overview. <http://www.oasis-open.org/committees/download.php/27819/ssc-saml-tech-overview-2.0-cd-02.pdf> (March 2008).
- [7]. OASIS: SAML V2.0 Approved Errata. <http://docs.oasis-open.org/security/saml/v2.0/ssc-saml-approved-errata-2.0.pdf> (May 2012).

- [8]. Sakimura, N., Bradley, J., Jones, M., de Medeiros, B., Mortimore, C.: OpenID Connect Core 1.0 Incorporating Errata Set 1 (2014), OIDF.