A post-mortem empirical investigation of the popularity and distribution of malware files in the contemporary web-facing Internet

This short empirical paper investigates a snapshot of about two million files from a continuously updated big data collection maintained by F-Secure for security intelligence purposes. By further augmenting the snapshot with open data covering about half of a million files, the paper examines two questions: (a) what is the shape of a probability distribution characterizing the relative share of malware files to all files distributed from web-facing Internet domains, and (b) what is the distribution shaping the popularity of malware files? A bimodal distribution is proposed as an answer to the former question, while a graph theoretical definition for the popularity concept indicates a long-tailed, extreme value distribution. With these two questions - and the answers thereto, the paper contributes to the attempts to understand large-scale characteristics of malware at the grand population level - at the level of the whole Internet.
Towards a maturity modeling approach for the implementation of industrial internet

This Research-in-Progress paper facilitates the design and provides guidelines for the development of a maturity model to achieve a coordinated, systematic and stepwise adoption of industrial internet, thus enabling the industrial internet to be used to its full potential in manufacturing enterprises. Using analogous maturity models from the fields of supply chain management and product lifecycle maturity among others, this paper explains why a maturity model approach would facilitate the step-by-step implementation of industrial internet. The paper goes on to provide systematic design guidelines for industrial internet maturity model for mass production manufacturing industries which use heavy equipment. The detailed research design presented here uses ADR methodology to enable the construction of the ensemble artefact. The industrial internet maturity model will be tested, developed and validated using the experience-based feedback from industrial practitioners. This will enable the industry to plan a roadmap to assess the current situation and define the direction for the future development of industrial internet related activities and business models for industry.

General information
State: Published
Ministry of Education publication type: A4 Article in a conference publication
Organisations: Department of Information Management and Logistics, Research group: Novi
Authors: Menon, K., Kärkkäinen, H., Lasrado, L.
Publication date: 1 Jul 2016
Kokonaisvaltainen vesivarojen hallinta Laosin vesihallinnossa. Välitöaikkuna.: Implementation of integrated water resources management (IWRM) approach in water resources development and management of Lao PDR

Sari Jusi: Implementation of integrated water resources management (IWRM) approach in water resources development and management of Lao PDR: the cases of hydropower and irrigation, Acta Universitatis Tamperensis 1820, Tampere, 2013. (158 s. ja artikkelit)


The goal of this paper is to provide an overview of the methods used in assessing a group work product as well as the individual effort of the group participants. To accomplish the goal we use some practical examples, literature review, and our own personal experience. Finally, we propose an alternative assessment method for lecturers to use within their classes.