

Accepted Manuscript

Title: A new methodology towards effectively assessing data center sustainability

Author: Georgia Lykou, Despina Mentzelioti, Dimitris Gritzalis

PII: S0167-4048(17)30275-4

DOI: <https://doi.org/10.1016/j.cose.2017.12.008>

Reference: COSE 1256

To appear in: *Computers & Security*



Please cite this article as: Georgia Lykou, Despina Mentzelioti, Dimitris Gritzalis, A new methodology towards effectively assessing data center sustainability, *Computers & Security* (2017), <https://doi.org/10.1016/j.cose.2017.12.008>.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

A NEW METHODOLOGY TOWARDS EFFECTIVELY ASSESSING DATA CENTER SUSTAINABILITY

Georgia Lykou¹, Despina Mentzelioti¹ and Dimitris Gritzalis¹

¹ Dept. of Informatics, Athens University of Economics & Business, 76 Patission Ave., Athens GR-10434, Greece, {lykoug, dmentz, dgrit}@aueb.gr

Georgia LYKOU is a PhD candidate with the Information Security and Critical Infrastructure Protection (INFOSEC) Laboratory, Dept. of Informatics, Athens University of Economics and Business (AUEB), Greece. She holds a BSc (Informatics, Open University of Greece, GR), a BSc (Energy Technology Engineering, Athens Technological Educational Institute, GR), an MSc (Applied Policies and Technologies on Environmental Protection, Piraeus Technological Educational Institute, GR), an MSc (Information Systems, AUEB, GR) and an MBA (AUEB, GR). She works at the Hellenic Civil Aviation Authority, Greece. Her current research interests include critical infrastructure protection, energy assessment and sustainability, risk assessment, and information security.

Despina MENTZELIOTI is a PhD candidate with the Information Security and Critical Infrastructure Protection (INFOSEC) Laboratory, Dept. of Informatics at Athens University of Economics and Business, Greece. She holds a DiplEng (Computer Engineering and Informatics, Univ. of Patras, GR) and an MPhil (Computational Biology, Univ. of Cambridge, UK). She works at the Ministry of Finance, Greece. Her current research interests include information security, critical infrastructure protection, and risk assessment.

Dimitris GRITZALIS is the Associate Rector for Research and a Professor of IT Security at Athens University of Economics and Business, Greece. He is, also, the Director of the Information Security and Critical Infrastructure Protection (INFOSEC) Laboratory and the Director of the MSc Programme in Information Systems. He holds a BSc (Mathematics, Univ. of Patras, GR), an MSc (Computer Science, City University of New York, US) and a PhD (Critical Information Systems Security, Univ. of the Aegean, GR). His current research interests focus on information security, critical infrastructure protection and social media intelligence. He has served as Associate Commissioner of the Greek Data Protection Commission and as the President of the Greek Computer Society. Prof. Gritzalis is the Academic Editor of the Computers & Security journal (Elsevier) and the Scientific Editor of the International Journal of Critical Infrastructure Protection (Elsevier).

Abstract

Data centers are found in nearly every sector of the economy, such as financial and commercial services, media and communications, academic and governmental institutions. Day to day, there is an increasing demand for data processing and storage, thus cloud computing has been evolved, supported by the continued growth of internet services worldwide. This has led to significant energy consumption, accompanied with serious environmental impacts, such as earth resources spending, greenhouse gas emissions, electronic equipment waste and environmental pollution.

Download English Version:

<https://daneshyari.com/en/article/6883946>

Download Persian Version:

<https://daneshyari.com/article/6883946>

[Daneshyari.com](https://daneshyari.com)