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Cybersecurity – A Major Issue of the 15th International Conference on Quality and Dependability CCF 2016

Ioan C. BACIVAROV
EUROQUALROM-ETTI, University "Politehnica" of Bucharest, Romania
bacivaro@euroqual.pub.ro

Abstract
In the first part of this paper the concepts of cybersecurity and cybercrime and their importance are analyzed. It is underlined that cybersecurity is one of the biggest issues currently facing governments and businesses in the European Union (EU) and globally. In this context, a special attention is given to analysis of the European Cyber Security Strategy. In the second part of the paper is underlined the fact that cybersecurity was one of the main topics of the 15th International Conference in Quality and Dependability – CCF 2016. Based on the papers presented during CCF 2016 one can conclude that one can speak of a "Romanian school in reliability field", whose achievements and representatives are recognized abroad. Judging after the papers presented by the PhD candidates in the field of cybersecurity during CCF2016, the future of this domain is "in good hands".

Keywords: Cybersecurity, Cybercrime, IT security, Cyber Security Strategy, CCF2016, International Conference in Quality and Dependability

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Quality Management in Food Industry

Srđan TOMIĆ[1], Mirjana KRANJAC[2]
[1]University „Union Nikola-Tesla", Faculty of Enginnering Management, Beograd, Serbia;
[2]University of Novi Sad, Faculty of Technical Sciences Novi Sad, Department for Transport, Novi Sad, Serbia
srdjan.tomic@fim.rs

Abstract
Management strategy is the management's answer to the changes, the way to achieve the competitive advantage, to create diversity, to introduce new methods of performing a job that others lack, to become superior, to position itself in the minds of customers as different from its competitors, with different and complete range of products for specific customer groups, which are on the one hand acceptable for customers (where it is possible to segment them), an on the other hand for competitors. Thus, strategy does not anticipate success, it anticipates competitiveness. Considering importance the food has globally, as well as profitability of food industry it is clear that food quality assurance is one of the most important areas of quality management, due to that many standards were published in this area, some causing a lot of controversies today.

Keywords: Quality; Strategic market relations; Food Quality management, HACCP, ISO 22000, Codex ALimentarius; Customers

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Threat Intelligence Based Security Operations Centers

Ionuţ-Daniel BARBU, Cristian PASCARIU, Ioan C. BACIVAROV
EUROQUALROM – ETTI, University "Politehnica" of Bucharest, Romania
barbu.ionutdaniel@gmail.com

Abstract
With the advent of complex techniques, tactics and procedures used by the adversaries, Security Operations Center are starting to become obsolete. This paper changes the focal point to an advanced model that leverages intelligence to understand and anticipate threats targeting the organization. One of the most important aspects of this model is represented by this ability of anticipating threats before turning into incidents and moreover it highlights the proactive vs. reactive approach towards cybersecurity. Using this format, in the following pages the authors intended to build a comparison between a Security Operations Center and Security Intelligence Center by analyzing the impact of and steps needed for such a transition to both processes and people. Needless to say, it is critical to dedicate numerous and valuable resources to the automation aspect of such a migration. In this way management will enable the analysts and engineers to separate from routine activities, allowing them to focus on performing threat hunting against the intelligence gathered. As the enterprise oriented tools from various vendors are intended to work for everyone but are optimized for no one, the authors highlight the importance of deploying custom tools supported by knowledgeable engineering teams. Based on the authors' research one of the initial steps and perhaps one of the most effective projects on this matter would be the implementation of a honeypot environment for obtaining tailored IoCs.

Keywords: IT Security, Cyber-Security, SOC, SIC, Threat Intelligence, APT, HoneyPots

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A Graph-driven Approach to Data Loss Prevention

Michael BEST
Bensheim, Germany
mb@michael-best.de

Abstract
Today, one threat to cybercrime is data leakage. Examples for this are the Snowden publications, theft of financial data or wikileaks. In this paper, a concept is shown to visualize the path between the asset and an actor who might leak the data. To prevent data loss, this path must be secured.

Keywords: Cybercrime, Security, Data, Data loss prevention, Graph-driven approach

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A Reliable Architecture for a Massive and Continuous Scanner of Web Vulnerabilities in Internet

Eugenie STĂICUŢ, Radu BONCEA, Carmen ROTUNĂ
Romania Top Level Domain, National Institute for Research and Development in Informatics-ICI Bucharest
estaicut@rotld.ro

Abstract
In recent years, the Web has become one of the major vectors for transmitting malware and computer viruses. As a response, nations around the world have established Computer Emergency Response Teams with the purpose of countering the next generation of cyber threats. One such solution is for CERTs to pro-actively scan the Web for vulnerabilities and notify the right persons before malicious users could exploit the vulnerable application. Another solution is to search the Web for compromised and vulnerable applications and take appropriate actions, such as sending simple notifications to application's owner. Either way, continuously scanning of the Web is a complex task which requires a reliable architecture. In this paper we propose a data-centric architecture, with focus on a distributed streaming processing system. We will define a virtual process bus as a group of data channels where a process can take its input from a specific channel and write the result to an output set of channels.

Keywords: cybersecurity, stream processing, distributed processing, messaging, ETL, Kafka, vulnerability

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Reliability Tests for Switches Used in Telecommunication Networks

Dragoș VÂRŞESCU[1], C. PATRICHE[2], N. DUMBRĂVESCU[1], M. BÂZU[1], I. BACIVAROV[2]

[1]Reliability Lab., National Institute for R&D in Microtechnology – IMT-Bucharest, Romania;
[2]Faculty of Electronics, Telecommunications and Information Technology, University Politehnica of Bucharest, Romania
dragos.varsescu@imt.ro

Abstract
The results of several reliability tests concerning switches used in telecommunications networks are presented. Tests were combined ones: temperature and humidity, and the experiment was conducted step-by-step, with failures analysis carried out after each test step, so as to simulate actual operating conditions. An analysis of the results was performed, finally making a series of recommendations on changes in manufacturing technology switches in order to increase their level of reliability.

Keywords: Reliability, Reliability tests, Accelerated tests, Failure analysis, Switches, Telecommunication networks

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