2017 3rd International Conference of Cloud Computing Technologies and Applications (CloudTech 2017)

Rabat, Morocco
24-26 October 2017

IEEE Catalog Number: CFP17B66-POD
ISBN: 978-1-5386-1116-6

Copyright © 2017 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number: CFP17B66-POD
ISBN (Print-On-Demand): 978-1-5386-1116-6
ISBN (Online): 978-1-5386-1115-9

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

Contents

Cloud Computing: Overview and Risk Identification Based on Classification by Type **1**
Chaimaa Belbergui, Najib Elkamoun and Rachid Hilal

A Self-Adaptive Very Fast Simulated Annealing Based on Hidden Markov Model **9**
Mohamed Lalaoui, Abdellatif El Afia and Raddouane Chiheb

Performance prediction using support vector machine for the configuration of optimization algorithms **17**
Malek Sarhani and Abdellatif El Afia

Performance Evaluation of Container and Virtual Machine Running Cassandra Workload **24**
Sogand Shirinbab, Lars Lundberg and Emiliano Casalicchio

Pairing free and implicit certificate based signcryption scheme with proxy re-encryption for secure cloud data storage **32**
An Braeken, Placide Shabisha, Abdellah Touhafi and Kris Steenhaut

Protecting Medical Images in Cloud Using Visual Cryptography Scheme **39**
Mbarek Marwan, Ali Kartit and Hassan Ouahmane

Using Cloud Solution for Medical Image Processing: Issues and Implementation Efforts **45**
Mbarek Marwan, Ali Kartit and Hassan Ouahmane

X-ETL : a New Method for Designing Multidimensional Models **52**
Nawfal El Moukhi, Ikram El Azami and Abdelaaziz Mouloudi

A new cryptographic method for cloud computing **58**
Ahmed EL-YAHYAOUI and Mohamed Dafir ECH-CHRIF EL KETTANI

A Machine Learning Approach for Sentiment Analysis in the Standard or Dialectal Arabic Facebook Comments **66**
Abdeljalil Elouardighi, Mohcine Maghfour, Hafdalla Hammia and Fatima-zahra Aazi

On Automated Cloud Bursting and Hybrid Cloud Setups Using Apache Mesos **74**
Noha Xue, Harek Haugerud and Anis Yazidi

An Intelligent Scheduling Algorithm for Energy Efficiency in Cloud Environment Based on Artificial Bee Colony **82**
Awatif Ragmani, Amina El Omri, Noreddine Abghour, Khalid Moussaid and Mohammed Rida

A Cloud-based RFID for VANET Access filtering **90**
MELAOUENE Noussaiba, ELMAKFALJI Chaimae and ROMADI Rahal

Using Branch-and-Price to maximize redundant network utilization in cloud datacenter **96**
Shuo Wang, Qiqi Wang, Hongjie Zhang and Jing Li

Dynamic web service composition using AND/OR directed graph **104**
Hajar Elmaghraoui, Laila Benhlima and Dalila Chiadmi

Survey: Risk assessment models for cloud computing: evaluation criteria **112**
MANNANE Nada, BENCHARHI Yousse, BOULAFDOUR Brahim and REGRAGUI Boubker

Load Balancing Between Nodes in a Volunteer Cloud Computing by Taking Into Consideration the Number of Cloud Services Replicas **117**
Sofiane Mounine Hemam, Ouassila Hioual and Ouided Hioual

A Parallel Semantic Sentiment Analysis **125**
MADANI Youness, ERRITALI Mohammed and BENGOURRAM Jamaa

A Database for Amazigh Speech Recognition Research **131**
Safâa EL OUAHABI, Mohamed ATOUNTI and Mohamed BELLOUKI

Performance Analysis of Intrusion Detection Systems in the Cloud Computing **136**
Mostapha Derfouf and Mohsine Eleuldj

Temporary Materialized Views in Cloud Data Warehouses through a Web Service **144**
Ettaoufik Abdelaziz and Ouzzif Mohamed

Cloud Architecture For Digital Phenotyping And Automation **150**
Olivier Debauche, Saïd Mahmoudi, Pierre Manneback, Mathieu Massinon, Nassima Tadrist, Frédéric Lebeau and Sidi Ahmed Mahmoudi

Towards a fast search engine in cloud **159**
Mohammed Amin BELARBI, Said Mahmoudi, Ghalem Belalem and Sidi Ahmed Mahmoudi

Cloud autoscaling for HTTP/2 workloads **166**
Maria Carla Calzarossa, Luisa Massari, Momin I.M. Tabash and Daniele Tessera

Toward a Meta-Model for Elasticity Management in Cloud Applications **172**
Saddam Hocine Hiba and Meriem Belguidoum

Machine Learning applications in supply chains An emphasis on neural network applications **178**
Halima BOUSQAOUI, Said ACHCHAB and Kawtar TIKITO

Energy-efficient on caching in Named Data Networking: A survey **185**
Safae Rahel, Abdellah Jamali and Said El Kafhali

The impact of payment delays on bankruptcy prediction **193**
Fatima Zahra Azayite and Said Achchab

Combination POS Taggers on Amazigh Texts **200**
Samir Amri, Lahbib Zenkouar and Mohamed Outahajala

A Framework for Big Data analytics in Secure Network of Video surveillance Systems Based on Images Indexation **206**
Abderrahmane EZ-ZAHOUT and Jawad OUBAHA

Smart Pattern Authentication System for Cloud Consumers **211**
Abdelwahhab SATTA and Sihem MOSTEFAI

FADETPM: Novel Approach of File Assured Deletion Based on Trusted Platform Module **215**
IGARRAMEN Zakaria and HEDABOU Mustaha

A Smart Metering Platform Using Big Data and IoT Technologies **223**
Anass Berouine, Fadwa Lachhab, Youssef Nait Malek, Mohamed Bakhouya and Radouane Ouladsine

Minimizing Biased VM Selection in Live VM Migration **229**
Suhib Bani Melhem, Anjali Agarwal, Nishith Goel and Marzia Zaman

DDoS Attack Detection using Machine Learning Techniques in Cloud Computing Environments **236**
Marwane Zekri, Said El Kafhali, Noureddine Aboutabit and Youssef Saadi

Verbal morphological Analyzer/Generator for Amazigh moods based on XFST **243**
Rachid Ammari, Lahbib Zenkouar and Mohamed Outahajala

A New Technique Ensuring Privacy in Big Data: Variable t-Closeness for Sensitive Numerical Attributes **251**
Zakariae El Ouazzani and Hanan El Bakkali

Solid-Flow : A Flow Rules Security Mechanism for SDN **257**
Youssef QASMAOUI and Abdelkrim HAQIQ

External clustering validation in Big Data context **264**
Soumeya Zerabi and Souham Meshoul

TASMR: Towards Advanced Secure MapReduce Framework Across Untrusted Hybrid Clouds **270**
Amine Haouari, Mostapha Zbakh, Rachid Cherkaoui, Yassir Samadi and Najlae Kasmi

A secure virtualization architecture based on a nested Nova hypervisor **279**
Hala Zineb NAJI and Mostapha ZBAKH

Towards conflicts prevention among privacy policies: A comparative study of major privacy laws and regulations for healthcare **286**
Souad SADKI, Hanan EL BAKKALI and Mohammed AKHATTAB

CloudLab-Weaver: An Innovative Approach to Interconnect Distributed Cloud based Online Labs **293**
Abdellah Touhafi, An Braeken, Said Ben Alla and Mostapha Zbakh

Context-Aware Routing Protocol based on PSO for Mobile WSN **300**
Asmae EL GHAZI, Zineb AARAB and Belaıd AHIOD

Issues and Threats of Data stored in Cloud **306**
Maryem BERREZZOUQ and Abdellatif ELGHAZI

Performance Evaluation of StarPU Schedulers with Preconditioned Conjugate Gradient Solver on Heterogeneous (Multi-CPUs/Multi-GPUs) Architecture **312**
Najlae Kasmi, Mostapha Zbakh, Yassir Samadi, Rachid Cherkaoui and Amine Haouari

Efficient Allocation of VMs in servers of Data Center to reduce energy consumption **318**
Djouhra DAD and Ghalem BELALEM

Towards a context-Driven plateform using IoT and Big Data technologies for Energy Efficient Buildings **324**
Mohamed Bakhouya, Youssef NaitMalek, Abdellatif Elmouatamid, Fadwa Lachhab, Anass Berouine, Sofia Boulmrharj, Redouane Ouladsine, Vincent Felix, Khalid Zinedine, Mohamed Khaidar and Najib Elkamoune

An NLP based text-to-speech synthesizer for Moroccan Arabic **329**
Rajae Moumen, Raddouane Chiheb, Rdouan Faizi and Abdellatif El Afia