COMPUTING

ENTERPRISE CLOUD DEPLOYMENT 32

CLOUD FEDERATION MANAGEMENT 42







CONTENT



What will the future of cloud computing look like? What are some of the issues professionals, practitioners, and researchers need to address when utilizing cloud services? *IEEE Cloud Computing* magazine serves as a forum for the constantly shifting cloud landscape, bringing you original research, best practices, in-depth analysis, and timely columns from luminaries in the field.

FEATURED ARTICLES

24 Price Elasticity in the Enterprise Computing Resource Market

Qingye Jiang, Young Choon Lee, and Albert Y. Zomaya

32 Enterprise Cloud Deployment: Integration Patterns and Assessment Model

Steve Asmus, Ahmed Fattah, and Chris Pavlovski

42 Cloud Federation Management and Beyond: Requirements, Relevant Standards, and Gaps

Craig A. Lee

50 Forensic-by-Design Framework for Cyber-Physical Cloud Systems

Nurul Hidayah Ab Rahman, William Bradley Glisson, Yanjiang Yang, and Kim-Kwang Raymond Choo

60 EvacSys: A Cloud-Based Service for Emergency Evacuation

Osman Khalid, Muhammad Usman Shahid Khan, Ying Huang, Samee U. Khan, and Albert Zomaya

January/February 2016 Volume 3, Issue 1

www.computer.org/cloudcomputing

COLUMNS

6 From the Editor in Chief

Hybrid Clouds

Mazin Yousif

8 What's Trending?

Understanding Complex Cloud Patterns

David S. Linthicum

12 Cloud and the Law

Encryption-Based Solution for Data Sovereignty in Federated Clouds

Christian Esposito, Aniello Castiglione, and Kim-Kwang Raymond Choo

18 Cloud Economics

Hybrid Cloud Economics

Joe Weinman

72 Blue Skies

Holistic Performance Monitoring of Hybrid Clouds: Complexities and Future Directions

Maitreya Natu, Ratan K. Ghosh, Rudrapatna K. Shyamsundar, and Rajiv Ranjan

82 Cloud and the Government

The Hybrid Cloud Security Professional

Adam Gordon

88 Cloud Tidbits

Emerging Hybrid Cloud Patterns

David S. Linthicum

92 Standards Now

Standards for Hybrid Clouds

Alan Sill

7 IEEE CS Information

59 Advertising Index

Reuse Rights and Reprint Permissions: Educational or personal use of this material is permitted without fee, provided such use: 1) is not made for profit; 2) includes this notice and a full citation to the original work on the first page of the copy; and 3) does not imply IEEE endorsement of any third-party products or services. Authors and their companies are permitted to post the accepted version of their IEEE-copyrighted material on their own Web servers without permission, provided that the IEEE copyright notice and a full citation to the origin all work appear on the first screen of the posted copy. An accepted manuscript is a version which has been revised by the author to incorporate review suggestions, but not the published version with copyediting, proofreading and formatting added by IEEE. For more information, please go to: http://www.ieee.org/publications_standards/publications/rights/paperversionpolicy.html.

Permission to reprint/republish this material for commercial, advertising, or promotional purposes or for creating new collective works for resale or redistribution must be obtained from the IEEE by writing to the IEEE Intellectual Property Rights Office, 445 Hoes Lane, Piscataway, NJ 08854-4141 or pubs-permissions @ieee.org. Copyright © 2016 IEEE. All rights reserved.

Abstracting and Library Use: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy for private use of patrons, provided the per-copy fee indicated in the code at the bottom of the first page is paid through the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923. IEEE prohibits discrimination, harassment, and bullying. For more information, visit www.ieee.org/web/aboutus/whatis/policies/p9-26.html.