

Guest Editorial Preface

Special Issue on Open Source Software Computing

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Open Source Software Computing OSSCOM aims to setup linkage systems between the educational institutions and enterprises to support transformative technical education and rejuvenation, build OSS hubs and communities, and enhance technology access to societies at large. Technology centers will be setup in partnership with enterprises to provide coordinated support and resources for developing and enabling an environment for large scale OSS technology outreach and its use in institutions.

OSSCOM road map is to establish links with enterprises for relevance of ICT education; setup OSS technology hubs to provide support to communities and promote innovation and business acceleration; develop OSS technology resources; facilitate the adoption of OSS as feasible alternatives to proprietary software; and create entrepreneurship incubators and business start-up facilities. Activities will span the whole cycle of integration, from setting up links with enterprises and establishing specialized OSS technology centers to the integration of OSS into education and learning systems and transformation of innovation and business startups.

OSSCOM lines up at supporting institutions to strongly link with enterprises, with a goal to build large-scale OSS resources, knowledge, and expertise through a network of OSS communities. Equally, OSS allows addressing different relevant aspects related to the definition and objectives of open source in education, including different business models, digital divide, copyright, intellectual property, software piracy, and information society inclusion and exclusion. The learning resources at the institutions will undergo a modernization process to accommodate new development investigated in OSS technologies. The diverse domain expertise developed in the OSS will create a framework for modernization and revisions.

The structure of the OSS centers will be based on powerful computing machines, running portal integration software, knowledge/information repository, and a kind of Wiki for OSS technologies and terminologies. All OSS centers will comprise as a one powerful computing infrastructure hosting varieties of OSS applications, products and development projects. The infrastructure will also be available for education communities for further collaboration. On this basis, the technical prerequisite of the OSS centers requires building powerful computing infrastructure.

This special issue of the International Journal of Cloud Applications and Computing brings together a selection of insightful papers that address some of the OSSCOM issues related to the infrastructure of the OSS centers. In the first paper of this special issue; *Detection and Ignoring of Blackhole Attack in Vanets Networks*, two mechanisms are proposed to detect black hole attack and have been evaluated by the detailed simulation with NS2. The second paper; *A Based-Rule Method to Transform CIM to PIM into MDA*, presents an approach that allows mastering transformation from CIM to PIM into MDA. This approach is based on good CIM level through selected rules allowing provide rich models that facilitate the transformation to PIM level. Afterwards, a concentrated PIM level is determined with main design models established through use case diagram, state diagram, and package diagram. The third paper; *An Improved Secure Sip Registration Mechanism to Avoid Voip Threats*, suggests a secure distributed session initiation protocol-based architectural model that can be deployed in service provider data centers to maintain the service availability, scalability, and security.

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