Cloud computing is a quite new concept for which the resources are virtualized, dynamically extended and provided as a service on the Internet. In this paper, we present a comparative study between some of the IaaS (Infrastructure as a Service) commonly used to select the best suited one for deployment and research development in the field of cloud computing. The aim is to provide the computer industry with the opportunity to build a hosting architecture, massively scalable which is completely open source, while overcoming the constraints and the use of proprietary technologies. Then, we present the solution OpenStack retained by the comparative study. We discuss in detail its functional and architectural system. We finish by a discussion of the motivation of our choice of the IaaS solution.
OpenStack: Toward an Open-source Solution for Cloud Computing

1109/MIC. 2009. 119.
- Eucalyptus URL: http://www.eucalyptus.com/
- Google Insight URL: http://www.google.com/insights/search/?hl=en
- Ken pepple URL: http://ken.pepple.info/
- Nimbus. URL: http://www.nimbusproject.org/.
- OpenNebula URL: http://opennebula.org/
- Openstack Open source software for building private and public clouds. URL: http://www.OpenStack.org/.
- Open vSwitch URL: http://openvswitch.org/
- Peter Sempolinski and Douglas Thain, A Comparison and Critique of Eucalyptus, OpenNebula and Nimbus, University of Notre Dame.
- Quantum NEC OpenFlow Plugin URL: http://wiki.openstack.org/Quantum-NEC-OpenFlow-Plugin

Index Terms

Computer Science Cloud Computing
Keywords
Opencloud  IAAS  OpenStack  Eucalyptus  OpenNebula  Virtualization  Scalableifx