IBM

IBM and European Union Launch Joint Research Initiative for Cloud Computing

HAIFA, ISRAEL - 05 Feb 2008: Expanding its cloud computing initiative, IBM (NYSE: IBM) today announced that it is leading a joint research initiative of 13 European partners to develop technologies that help automate the fluctuating demand for IT resources in a cloud computing environment.

The 17M Euro EU-funded initiative, called RESERVOIR -- Resources and Services Virtualization without Barriers -- will explore the deployment and management of IT services across different administrative domains, IT platforms and geographies. This cloud computing project aims to develop technologies to support a service-based online economy, where resources and services are transparently provisioned and managed.

Cloud computing is an emerging approach to shared infrastructure in which large pools of systems are linked together to provide IT services. The need for such environments is fueled by dramatic growth in connected devices, real-time data streams, and the adoption of service oriented architectures and Web 2.0 applications, such as mashups, open collaboration, social networking and mobile commerce. Continuing advances in the performance of digital components has resulted in a massive increase in the scale of IT environments, driving the need to manage them as a unified cloud.

IBM, which has been researching technologies related to cloud computing for more than a decade, kicked off a companywide cloud computing initiative in 2007 across its server, software, services, and R&D units. In November, IBM unveiled plans for "Blue Cloud," a series of cloud computing offerings that will allow corporate data centers to operate more like the Internet through improved organization and simplicity.

"You can think of cloud computing as the Internet operating system for business and RESERVOIR as pioneering technologies that will enable people to access the cloud of services in an efficient and cost effective way," said Dr. Yaron Wolfsthal, senior manager of System Technologies at the IBM Research Lab in Haifa, Israel.

"With demand for IT resources hard to predict, service providers usually over-provision resources in order to support peak demands and ensure continuous service availability and quality, while other systems run at lower capacity," said Dr. Wolfsthal. "But with RESERVOIR, our aim is to provide cloud-computing-based technologies that will enable the borderless delivery of IT services based on actual demands to keep costs competitive."

To support the seamless delivery of services to consumers regardless of demand or available computing resources, RESERVOIR will investigate new capabilities for the deployment of commercial service scenarios that cannot currently be supported. These capabilities will be made possible by developing new virtualization and grid technologies.

For example, RESERVOIR could be used to simplify the delivery of online entertainment.

As the distribution of television shows, movies and other videos are moving to the Web, the RESERVOIR project would work to enable a network of service providers to host the different media. Using cloud computing technology, the broadcasters can join forces to reach a service cooperation contract that enables them to tap into advanced services including content distribution, load balancing, and overlay networking across different platforms in different countries.

Any time additional services or infrastructure are needed, they could be rapidly supplied through the cloud by one of the various RESERVOIR-powered sites. For example, if there is large demand for a show hosted by a particular site, it could dynamically 'hire' additional servers and services from other sites that are not being used.

The IBM Haifa Research Lab will lead this computing project and the consortium of partners from academia and industry to pursue this effort. Research partners on this initiative from across academia and industry include Elsag Datamat, CETIC, OGF.eeig standards organization, SAP Research, Sun Microsystems, Telefónica Investigación y Desarrollo, Thales, Umea University, University College of London, Universidad Complutense de Madrid, University of Lugano and University of Messina.

RESERVOIR will be built on open standards to create a scalable, flexible and dependable framework for delivering services in this cloud computing model. The technologies developed by this project are expected to serve IBM, partners and customers in the development of modern data centers with quantified and significant improvements in service delivery productivity, quality, availability and cost.

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