**Networking Science Seminar学术报告详细信息**

**1、Enabling Seamless Enterprise Cloud Computing and Storage**

**Abstract:**

Cloud computing has been changing how enterprises run and manage their IT systems. Cloud computing platforms provide customers with flexible, on demand resources at low cost. It also offers the opportunity to lower costs for enterprises in deploying disaster recovery solutions.

Our CloudNet architecture provides comprehensive control over network resources and security for users by utilizing Virtual Private Networks. CloudNet securely, seamlessly and dynamically links cloud and enterprise sites. CloudNet opens new opportunities for cross data center load balancing and dynamic application placement based on metrics like latency to users or energy cost.

Cloud hosting promises economies of scale and on-demand provisioning that are a perfect fit for the infrequent yet urgent needs of disaster recovery. We build on CloudNet to solve the difficult problem of disaster recovery to Cloud sites that are geographically distant from the enterprise's primary site. The WAN latency between a cloud site and an enterprise can become a major performance bottleneck when synchronously replicating an application's data into the cloud to achieve tight recovery point objectives. I will describe our proposal called 'Pipelined synchrony' to address this problem.

**2、Memory Efficient Routing Table Design and Fast IP Lookup for High-end Core Routers**

**Abstract:**

We have designed memory efficient routing table construction and fast IP lookup algorithms that meet a key challenge for HPN/H3C to compete with Cisco and Juniper in high-end core router technologies.

**3、Chemical Reaction Optimization**

**Abstract:**

Chemical Reaction Optimization (CRO) is a recently established metaheuristics for optimization, inspired by the nature of chemical reactions. A chemical reaction is a natural process of transforming unstable substances to stable ones. In microscopic view, a chemical reaction starts with some unstable molecules with excessive energy. The molecules interact with each other through a sequence of elementary reactions. At the end, they are converted to those with minimum energy. This property is embedded in CRO to solve optimization problems. CRO can be applied to tackle problems in both the discrete and continuous domains. We have successfully applied CRO to solve a broad range of problems, including the problems of quadratic assignment, neural network training, stock portfolio selection, short adjacent repeat identification in DNA sequencing, and optimal power flow. The simulation results demonstrate that CRO has superior performance when compared with other existing optimization algorithms. This talk introduces the operations of CRO, gives a technical overview of the current development and provides potential future research directions.

**4、Applying Social Network Metrics to Academic Publication Analysis**

**Abstract:**

In academic evaluation, the common practice is count the number of papers or number of citations. This practice is controversial, and does not necessarily lead to good research culture. We have defined some social network type of metrics based on publication and co-authorship graphs, and applied them to a relatively large CS publication database (3+ Million papers and 500K+ authors). Based on this study, we explore whether it is possible to "grade" professors.

**5、Internet and Broadcast**

**Abstract:**

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