

Theme : Big Data & Network

Subject : Low Cost Scalable Content Delivery Architecture

Introduction

The goal of this research project is to explore novel low cost scalable content delivery architectures and/or mechanisms that can be alternatives or substitutes of traditional high cost content delivery networks such as Akamai or Limelight.

One approach that we are considering is utilizing cloud storages of multiple cloud providers. MetaCDN is an Australian company providing similar service. In this case, the main problem may be how to save data transfer and storage cost and how to make up the lack of service coverage compared to the traditional CDN vendors. This is only an example but different approaches to achieve the goal are open.

Scope

Challenges that significantly reduce the content delivery cost to globally dispersed users include:

- Methods to reduce the cost of current CDN services.
- New content delivery architectures that utilize cloud computing, peer to peer network, or any other networking technologies to provide low cost service while guaranteeing QoS requirements.

Research questions

We are interested in the following research questions. These questions are not exhaustive but different research questions are open to discuss with research partners.

- Is it possible to reduce the content delivery service cost by utilizing cloud computing?
- How to minimize the data transfer and storage cost for content delivery to globally dispersed users?
- Are there any ideas in CCN (content centric network) that are able to be applied on current internet architecture for our purpose?

Expected Deliverables

The following is open to discussion:

- Suggestion of new mechanisms or architectures
- Detailed progress reports every 3 months summarizing accomplishments.
- Prototype samples
- Patents with Samsung SDS (if agreed)