

## **Nebula Distributed Edge cloud for data intensive computing**

### **Abstract:**

Centralized cloud infrastructures have become the popular platforms for data-intensive computing today. However, they suffer from inefficient data mobility due to the centralization of cloud resources, and hence, are highly unsuited for geo-distributed data-intensive applications where the data may be spread at multiple geographical locations.

### **Existing system:**

Existing systems focus on minimizing latency in answering queries in geo-distributed data centers and some other focus on stream analytic in geo distributed system. Cloud4Home focuses on edge storage where Nebula enables both storage and computation critical to achieving locality for data-intensive computing. Other storage-only solutions include CDNs such as Amazon's Cloud Front that focus more on delivering data to end-users than on computation. There are a number of relevant distributed Map Reduce projects in the literature .Moon focuses on voluntary resources but not in a wide-area setting. Hierarchical Map Reduce is concerned with compute intensive Map Reduce applications and how to apply multiple distributed clusters to them, but uses clusters and not edge resources. Focuses more on cross-phase Map Reduce optimization, albeit in a wide-area setting.

### **Disadvantages:**

1. These applications doesn't effects the distributed applications.
2. Some systems focused on storage and some on performance but not the both.

### **Proposed system:**

In this paper, we introduce a geo-distributed edge cloud system, called Nebula that explores the use of volunteer resources to democratize in-situ data-intensive computing. Although we focus on the voluntary aspect of Nebula, the system and techniques that we propose are not limited to

volunteer resources. Nebula allows dedicated resources in addition to volunteer resources to mitigate the reliability issues of volunteer-based systems. In contrast to existing volunteer platforms such as BOINC , which are designed for compute-intensive applications, and file-sharing systems such as Bit Torrent, our system is designed to support distributed data-intensive applications through a close interaction between compute and storage resources.

### **Advantages:**

1. Distributed applications will be accessed and data will be shared.
2. Nebula is robust to a range of failures of both hosted compute and storage nodes.
3. Nebula must be easy to use and manage both for users who execute their applications on the volunteer platform.

### **SYSTEM REQUIREMENTS**

#### **H/W System Configuration:-**

- Processor - Pentium –III
- RAM - 256 MB (min)
- Hard Disk - 20 GB
- Key Board - Standard Windows Keyboard
- Mouse - Two or Three Button Mouse
- Monitor - SVGA

#### **S/W System Configuration:-**

- Operating System : Windows95/98/2000/XP
- Application Server : Tomcat5.0/6.X
- Front End : HTML, Jsp
- Scripts : JavaScript.
- Server side Script : Java Server Pages.
- Database : MySQL 5.0

**Further Details Contact: A Vinay 9030333433, 08772261612, 9014123891**  
**#301, 303 & 304, 3rd Floor, AVR Buildings, Opp to SV Music College, Balaji Colony, Tirupati - 515702**  
**Email: info@takeoffprojects.com | www.takeoffprojects.com**

- Database Connectivity : JDBC

[www.takeoffprojects.com](http://www.takeoffprojects.com)

**Further Details Contact: A Vinay 9030333433, 08772261612, 9014123891**  
**#301, 303 & 304, 3rd Floor, AVR Buildings, Opp to SV Music College, Balaji Colony, Tirupati - 515702**  
**Email: [info@takeoffprojects.com](mailto:info@takeoffprojects.com) | [www.takeoffprojects.com](http://www.takeoffprojects.com)**