**CHARON: A Secure Cloud-of-Clouds System for Storing and Sharing Big Data**

**ABSTRACT:**

We present CHARON, a cloud-backed storage system capable of storing and sharing big data in a secure, reliable, and efﬁcient way using multiple cloud providers and storage repositories to comply with the legal requirements of sensitive personal data. CHARON implements three distinguishing features: (1) it does not require trust on any single entity, (2) it does not require any client-managed server, and (3) it efﬁciently deals with large ﬁles over a set of geo-dispersed storage services. Besides that, we developed a novel Byzantine-resilient data-centric leasing protocol to avoid write-write conﬂicts between clients accessing shared repositories. We evaluate CHARON using micro and application-based benchmarks simulating representative workﬂows from bioinformatics, a prominent big data domain. The results show that our unique design is not only feasible but also presents an end-to-end performance of up to 2.5×better than other cloud-backed solutions.

**SYSTEM REQUIREMENTS:**

**HARDWARE REQUIREMENTS:**

* System : Pentium Dual Core.
* Hard Disk : 120 GB.
* Monitor : 15’’ LED
* Input Devices : Keyboard, Mouse
* Ram : 1 GB

**SOFTWARE REQUIREMENTS:**

* Operating system : Windows XP/UBUNTU.
* Implementation : NS2
* NS2 Version : 2.28
* Front End : OTCL (Object Oriented Tool Command  Language)
* Tool : Cygwin (To simulate in Windows OS)