

## **Analisis Performansi Skalabilitas Linear *Cassandra***

**Yola Adipratama<sup>1</sup>, Sidik Prabowo<sup>2</sup>, Siti Amatullah Karimah<sup>3</sup>**

<sup>1,2,3</sup>Fakultas Informatika, Univeristas Telkom Bandung

<sup>4</sup>Divisi Digital service PT Telekomunikasi Indonesia

<sup>1</sup>yolaadipratama@students.telkomuniversity.ac.id, <sup>2</sup>pakwowo@telkomuniversity.ac.id,

<sup>3</sup>karimahsiti@telkomuniversity.ac.id

---

### ***Abstract***

*These modern day internet and social media become primary needs in life, then it require an application that able to process Big Data. Big Data had some type and characterictic, one of which is unstructured file system or commonly called NoSQL file system. Cassandra Architecture was designed to update their data in memory structure called memtables and compact it in disk called SSTables, with evenly distribution data in each nodes on cluster using gossip protocol. It causes every nodes had replica of the data and can work independently when one of them goes down. Increasing nodes could increase the performance quality because of it characteristic is linear scalable, which means adding nodes will make a better performance. However test result only reach sublinear condition instead of linear. It can be caused by many things and factor that create overhead communication greater than its gain.*

***Keyword: Big Data, Apache Cassandra, Scalability***