**ABSTRACT**

Spark is a very versatile, adaptable platform for storage of data in real time and processing and focusing data analytics, data driven applications, however it was not begun in light of security or authorization for data. Spark is fitting for dealing with efficient in storage and analysis of data and it has certain security issues and also it uses third party security which used huge computations in all the versions of Spark.

This paper proposed a new security mechanism as single security instance gathering metadata from Namenode at regular intervals. SEAL (Spark E-Authentication Layer) as a secure layer which positioned above the Spark Cluster. Authentication of users is essential and plays a crucial role in securing data. This developed protocol SEAL is providing security using fewer computations, unlike integrating a third-party authentication protocol like Kerberos. Every new user must send a request to SEAL by sending an email id and it is generating a permanent unique key from the Metadata for each user using DNA sequences as single security instance forwards the created unique key to the user. The user is to be allowed in the spark cluster by verifying the user unique key.

Team Details

1. Rettala Nikhil Goud(20EG105317)
2. Kadiyala Venkat Sathwik(20EG105319)
3. Kandula Akshaya(20EG105322)

Dr J Balaraju M.Tech., PhD

Assistant Professor

Signature of Supervisor