# ABSTRACT (English)

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Secure Call log/CDR files in VoIP for billing

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There are three main goals of data Security in VoIP network, these three main goals sometimes called CIA (Confidentiality, Integrity and Availability).

Call log/CDR files is a file containing information such as source and destination of caller, time duration, Total amount billed of each call etc. Call log/CDR files is very important files for the company who used VoIP network for billing system. Because without these files billing process will not happen. Telkom International (TELIN)-Jakarta is one of the example who already implemented VoIP and use call log/CDR files for billing system.

Some security standards which have been implemented by Telkom International (TELIN-Jakarta) to secure call log/CDR files as below:

- Limited physical access to the Call log servers
- limited logical access to the call log servers
- limited access to the application or node which handle call record
- Implements SOA to the processing, collecting call log

Although Telkom International (TELIN-Jakarta) already have security system in the server which stored call log/CDR files, but Because the system it self connectedto the networks, so these methods still have possibilities to hackers to login the server, modify or delete the call log/CDR files. By analyzeexisting network and every possibility might happen to the server, we propose new methods which is combination between User privilege, Advanced Encryption Standard (AES) and MD5 algorithm. Based on web application that been built shows that our system has better performances in terms of security, data integrity and size of the files.

*Keywords: VoIP, CIA, CDR, User privilege, Encrypt-Decrypt (AES and MD5), User penetration attack*