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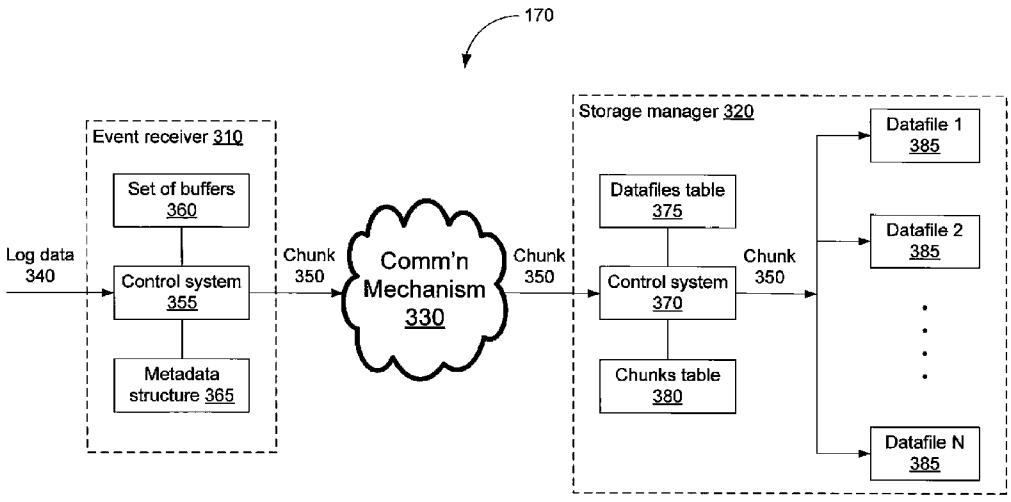
(54) Title: STORING LOG DATA EFFICIENTLY WHILE SUPPORTING QUERYING TO ASSIST IN COMPUTER NETWORK SECURITY




(57) Abstract: A logging system includes an event receiver and a storage manager. The receiver receives log data, processes it, and outputs a data "chunk." The manager receives data chunks and stores them so that they can be queried. The receiver includes buffers that store events and a metadata structure that stores metadata about the contents of the buffers. The metadata includes a unique identifier associated with the receiver, the number of events in the buffers, and, for each "field of interest," a minimum value and a maximum value that reflect the range of values of that field over all of the events in the buffers. A chunk includes the metadata structure and a compressed version of the contents of the buffers. The metadata structure acts as a search index when querying event data. The logging system can be used in conjunction with a security information/event management (SIEM) system.

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