PUNE INSTITUTE OF COMPUTER TECHNOLOGY, PUNE.

Department of Information Technology

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Project Title: Distributed Replicated Block Device (DRBD) Network Packet Tracing Module.

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Abstract

DRBD is a distributed replicated storage system for the Linux platform. It is implemented as a kernel driver, several user-space management applications, and some shell scripts. Our objective is to write a kernel module to trace/keep track of logs in memory and on-disk, for DRBD and perform various analytics on this data(like plotting the graph for accuracy, etc.). We also plan to write a utility/ daemon to pull tracing information from the kernel, and parse the data for reporting/debugging problems. The scope of our project is to provide an enterprise grade solution to analyze the packet transfer, to calculate the accuracy of data replicated at multiple nodes in a cluster, to determine the bandwidth required over a network based on the accuracy of the transfer of packets, and to determine the number of replication nodes required in a data cluster.