Optimizing Edge Computing with Volunteer Resources: A Hybrid Approach to Fog and Volunteer Computing

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Abstract— A comprehensive alternative to the centralized cloud architecture is fog computing, or FC. Users can access an FC node that is located closer to them and extends cloud services in a highly dispersed manner to the network's edge in a way. But with more people streaming and waiting around FC further requires delicate Internet of Things (IoT) applications to solve the problem of increased latency when forwarding computation demanding tasks to distant cloud data centers. Thus, there's a requirement to look into how computing resources are being used at the edge of the system. Volunteer Computing, or VC, provides a decrease in the price of utilizing high-performance computing to sustain of personally owned, unused, or idle resources, such as computers and desktop computers nearer to fogging apparatuses.
Keywords— Internet Of Things (IOT), Fog Computing, Cloud Architecture, Latency, Volunteer Computing