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(57) Abstract :
SELF-OPTIMIZING METHOD AND SYSTEM FOR DYNAMIC WORKLOAD MANAGEMENT IN DISTRIBUTED NETWORKS: NEXT-GEN EDGE COMPUTING ORCHESTRATOR ABSTRACT The invention discloses a Self-Optimizing Method and System for Dynamic Workload Management in Distributed Networks, embodied in a Next-Gen Edge Computing Orchestrator. The system 100 intelligently receives real-time workload data from multiple nodes within a distributed network, leveraging advanced machine learning algorithms to analyze and predict future workload patterns. Through dynamic adjustment of resource allocation based on these predictions, the Next-Gen Edge Computing Orchestrator optimizes overall system performance. The invention further features a feedback loop mechanism, continuously refining workload management strategies in response to real-time feedback and performance metrics. This self-optimizing approach enhances efficiency, adaptability, and responsiveness in distributed network environments, making it well-suited for diverse applications in edge computing. FIG. 1

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