Patent Search

Invention Title	DYNAMIC RESOURCE ALLOCATION IN CLOUD ENVIRONMENT USING MACHINE LEARNING DRIVEN PREDICTIVE ANALYTICS
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Abstract:

The present invention relates to a method and system for dynamic resource allocation in cloud environments utilizing machine learning-driven predictive analytics. B and analyzing historical resource usage data from cloud services, the system generates predictive models to forecast future resource demands accurately. Based on t predictions, resources are dynamically reallocated in real-time to optimize performance and minimize resource wastage. The invention incorporates a feedback mech continuously refines the predictive models and can operate across hybrid cloud environments, leveraging both on-premises and cloud resources. An optimization alg ensures cost-effective resource allocation while maintaining the desired quality of service. This innovative approach enhances operational efficiency, improves service and addresses the challenges associated with managing cloud resources in an increasingly dynamic landscape.

Complete Specification

Description:The embodiments of the present invention generally relates to the field of cloud computing, particularly focusing on dynamic resource allocation methodologies. It addresses the challenges associated with managing computational resources in cloud environments by utilizing machine learning-driven predictiv analytics to optimize resource distribution. This innovation seeks to enhance efficiency, reduce costs, and improve service quality through intelligent resource mana

BACKGROUND OF THE INVENTION

The following description of related art is intended to provide background information pertaining to the field of the disclosure. This section may include certain aspe the art that may be related to various features of the present disclosure. However, it should be appreciated that this section be used only to enhance the understan the reader with respect to the present disclosure, and not as admissions of prior art.

As cloud computing has gained widespread adoption, organizations are increasingly , Claims:1. A method for dynamic resource allocation in a cloud environmen comprising:

collecting historical resource usage data from one or more cloud services;

analyzing the collected data using machine learning algorithms to generate predictive models for forecasting future resource requirements;

predicting future resource demands based on the generated predictive models;

dynamically reallocating resources in real-time based on the predicted resource demands to ensure optimal performance and minimal resource wastage.

View Application Status