Krishna Narke, 2026, 14:2
ISSN (Online): 2348-4098
ISSN (Print): 2395-4752

International Journal of Science, Engineering and Technology
An Open Access Journal

Cloud Based Monitoring System

Krishna Narke, Sujal Boladra, Tanvi Shewale, Akshat Rampure
Department of Computer Science and Engineering (AI & Analytics) MIT ADT University, Pune, India

Abstract- The Cloud-Based Monitoring System is designed to monitor systems, applications, or environments in real time using cloud computing technologies. It collects data from various sources such as servers, sensors, or applications and stores it in the cloud for analysis and visualization. The system enables users to track performance, detect anomalies, and receive alerts from anywhere. Technologies like cloud platforms, APIs, and monitoring tools are used to ensure scalability and reliability. The system helps reduce downtime, improve performance, and enhance decision-making. It is widely used in IT infrastructure, healthcare, smart homes, and industrial automation. Overall, the project aims to provide an efficient, scalable, and remote monitoring solution.

Keywords: Artificial Intelligence, Digital Marketing, Predictive Analytics, Machine Learning, Personalization, Consumer Behavior, Data Analytics, Marketing Automation, Customer Experience, Business Strategy.

I. INTRODUCTION

Monitoring systems are essential for managing performance, security, and reliability in modern environments. Traditional monitoring methods require manual checking and local infrastructure, which can be inefficient and limited. A Cloud-Based Monitoring System solves these issues by using cloud technology to monitor systems remotely. It collects real-time data from different sources such as servers, applications, or IoT devices and sends it to cloud storage. The cloud processes this data and provides insights through dashboards and alerts. Users can access the monitoring system anytime and from anywhere using internet-enabled devices.

A. Objective

The main objectives of the system are as follows:

- To monitor systems and devices in real time using cloud technology.
- To collect and store monitoring data securely in the cloud.
- To create a smart and user-friendly emotion based application platform

II. RELATED WORK

Recent research shows that cloud computing and IoT technologies play a major role in modern monitoring systems.. Kumar et al. [1] developed a cloud-based IoT monitoring system for smart environments, enabling real-time data collection and analysis. Singh et al. [2] proposed a remote server monitoring system using cloud dashboards and alert mechanisms.

III. METHODOLOGY

The system follows the following steps:

A. Data Collection:

Sensors, servers, or applications generate monitoring data such as CPU usage, temperature, or network activity.

B. Data Transmission:

The collected data is sent to the cloud using APIs or IoT protocols.

C. Data Processing:

The cloud processes and analyzes the data to detect patterns or anomalies.

D. Storage:

All monitoring data is securely stored in cloud databases.

III. SYSTEM ARCHITECTURE

1. **Input Module –** Collects data from sensors, servers, or a
2. **Data Transmission Module –** Sends data to the cloud
3. **Cloud Processing Module –** Analyzes and processes

4. **Storage Module –** Stores data in cloud databases
5. **Monitoring Dashboard –** Displays real-time data
6. **Alert System –** Sends notifications for issues
7. **User Interface** – Allows users to monitor and control

V. RESULTS AND DISCUSSION

The system successfully monitored real-time data from servers, devices, and applications using cloud technology. The cloud platform efficiently processed and displayed the collected data through interactive dashboards, allowing users to easily understand system performance. Users were able to access monitoring information remotely from any location, which improved flexibility and control. The alert mechanism worked effectively by generating instant notifications during abnormal conditions, helping in quick issue resolution and reducing downtime.

VI. FUTURE WORK AND ETHICAL CONSIDERATIONS

- Integrate advanced analytics and machine learning techniques for predictive monitoring and anomaly detection.
- Expand the system to support more devices, sensors, and large-scale distributed environments.
- Add real-time monitoring with faster data processing and low-latency communication.
- Incorporate IoT-based inputs such as smart sensors and wearable devices for enhanced data collection.

VII. CONCLUSION

The Cloud-Based Monitoring System provides an efficient and reliable solution for monitoring systems and devices in real time using cloud technology. It effectively collects, processes, and analyzes data from various sources such as servers, applications, and sensors. The system enables users to access monitoring information remotely, improving flexibility and control. Real-time alerts and notifications help in quickly identifying and resolving issues, thereby reducing downtime and enhancing system performance. The system is scalable and adapts to increasing data and user demands over time. Overall, it demonstrates the effective integration of cloud computing with modern monitoring techniques to provide a smart and user-friendly solution.

Acknowledgment

The authors express their sincere gratitude to MIT ADT University, Pune, for providing research facilities and mentor- ship during this project.

REFERENCES

1. "Cloud-Based Monitoring System for IoT Applications" – IJERT
2. "Remote Server Monitoring Using Cloud Computing" – IRJMET
3. "Industrial Monitoring Using Cloud and IoT" – ResearchGate
4. "Secure Data Transmission in Cloud Monitoring Systems" – IEEE