

INTISARI

IMPLEMENTASI OTOMATISASI *ALERT* PADA SISTEM *MONITORING* SERVER MENGGUNAKAN PROMETHEUS DAN AI *AGENT* BERBASIS *LARGE LANGUAGE MODEL* TERINTEGRASI N8N

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Sistem *monitoring* berbasis Prometheus tidak menyediakan mekanisme penyimpanan riwayat *alert* secara otomatis sehingga analisis insiden masih dilakukan secara manual. Penelitian ini mengembangkan sistem otomatisasi pencatatan *alert* berbasis n8n yang terintegrasi dengan Google Sheets dan AI Agent berbasis *Large Language Model* untuk analisis interaktif melalui Telegram. Sistem menggunakan dua *workflow* utama, yaitu pencatatan otomatis *alert* dan analisis berbasis permintaan pengguna dengan pendekatan *Constraint-based Prompting*. Hasil pengujian menunjukkan keberhasilan fungsional 100% dan akurasi pencatatan 100%. Pengujian AI menghasilkan akurasi deteksi *intent* dan relevansi jawaban sebesar 100% dengan tingkat halusinasi 0%. Waktu respons sistem berada di bawah *threshold*, yaitu rata-rata 4,36 detik dan 3,20 detik pada *workflow* pencatatan otomatis *alert* serta 13,08 detik pada *workflow* analisis AI, sehingga sistem dinilai mampu meningkatkan efisiensi *monitoring* dan analisis insiden secara otomatis.

Kata kunci: *Workflow automation*, sistem *monitoring* server, Prometheus, *Large Language Model*.

ABSTRACT

IMPLEMENTATION OF AUTOMATED *ALERTING* IN SERVER *MONITORING* SYSTEMS USING PROMETHEUS AND AI AGENTS BASED ON *LARGE LANGUAGE MODELS* INTEGRATED WITH N8N

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Prometheus-based monitoring systems do not provide an automatic alert history storage mechanism, causing incident analysis to still be conducted manually. This research develops an alert logging automation system based on n8n integrated with Google Sheets and an AI Agent powered by a Large Language Model for interactive analysis via Telegram. The system utilizes two main workflows: automated alert logging and user-request-based analysis using a Constraint-based Prompting approach. The test results demonstrate 100% functional success and 100% logging accuracy. AI testing achieved 100% accuracy in intent detection and response relevance with a 0% hallucination rate. System response times remained below the threshold, averaging 4.36 seconds and 3.20 seconds for the automated alert logging workflows, and 13.08 seconds for the AI analysis workflow. Consequently, the system is considered capable of enhancing monitoring efficiency and automated incident analysis.

Keywords: workflow automation, server monitoring system, Prometheus, Large Language Model.