

INTISARI

IMPLEMENTASI SISTEM *MONITORING RESOURCE VIRTUAL PRIVATE SERVER* MENGGUNAKAN PROMETHEUS DAN GRAFANA DENGAN NOTIFIKASI MATTERMOST DAN WHATSAPP DI PT IKI KARUNIA

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PT IKI Karunia merupakan salah satu perusahaan yang bergerak di bidang finansial teknologi. Layanan PT IKI Karunia berjalan pada *virtual private server* yang harus selalu dalam keadaan optimal agar proses transaksi pengguna tidak terganggu. Salah satu gangguan pada *virtual private server* adalah kelebihan beban yang membuat layanan menjadi lambat, atau bahkan mati dikarenakan server tidak memiliki *resource* yang cukup untuk memenuhi *request client*. Untuk mencegah gangguan tersebut perlu dilakukan *monitoring resource virtual private server* untuk mengetahui kondisi sumber daya *virtual private server* secara *real time* agar mempermudah identifikasi dan mendeteksi anomali. Penerapan sistem *monitoring resource virtual private server* menggunakan Prometheus sebagai *time-series database* untuk menyimpan *metric*. Grafana berfungsi untuk memvisualisasikan hasil *query metrics* dari Prometheus. Sistem notifikasi dibangun menggunakan Mattermost dan diintegrasikan dengan Whatsapp menggunakan Matterbridge sehingga *stakeholder* dan tim infrastruktur dapat mengetahui kondisi *virtual private server* secara *real time* dengan mudah tanpa perlu membuka *dashboard monitoring* Grafana secara berkesinambungan. Hasil pengujian fungsionalitas dan notifikasi masing-masing sebanyak 177 kali dengan presentase keberhasilan seratus persen serta pengujian performa server *monitoring* menghasilkan rata-rata penggunaan CPU terbesar yaitu 2.39%, penggunaan *memory* terbesar 515.44 MB, penggunaan *network traffic* terbesar yaitu 12.56 Kb/s, penggunaan *disk space* terbesar yaitu 6.44 GB serta penggunaan *disk IO* terbesar yaitu 0.58 Mb/s dan nilai rata-rata penggunaan *memory*, *disk space*, *disk IO* dan *network traffic* berbanding lurus dengan jumlah *client* yang dimonitor.

Kata Kunci: *Infrastructure Monitoring*, *Resource Virtual Private Server*, Prometheus, Grafana, Mattermost, Whatsapp.

ABSTRACT

IMPLEMENTATION OF VIRTUAL PRIVATE SERVER RESOURCE MONITORING SYSTEM USING PROMETHEUS AND GRAFANA WITH MATTERMOST AND WHATSAPP NOTIFICATIONS AT PT IKI KARUNIA

PT IKI Karunia is a company engaged in the financial technology sector. PT IKI Karunia's services run on a virtual private server that must always be in an optimal state so that the user transaction process is not disrupted. One of the problems with virtual private servers is overloading which makes the service slow, or even shuts down because the server does not have enough resources to fulfill client requests. To prevent these disturbances, it is necessary to monitor virtual private server resources to determine the condition of virtual private server resources in real-time to facilitate the identification and detect anomalies. Implementing a virtual private server resource monitoring system uses Prometheus as a time-series database to store metrics. Grafana serves to visualize the results of query metrics from Prometheus. The notification system was built using Mattermost and integrated with Whatsapp using Matterbridge so that stakeholders and infrastructure teams can easily find out the condition of the virtual private server in real-time without the need to open the Grafana monitoring dashboard on an ongoing basis. The results of testing functionality and notifications each are 177 times with a success percentage of one hundred percent and testing server performance monitoring produces the largest average CPU usage, which is 2.39%, the largest memory usage is 515.44 MB, the largest network traffic usage is 12.56 Kb/s, disk usage the largest space is 6.44 GB and the largest disk IO usage is 0.58 Mb/s and the average value of memory usage, disk space, disk IO and network traffic is directly proportional to the number of clients being monitored.

Keyword: Infastructure Monitoring, Resource Virtual Private Server, Prometheus, Grafana, Mattermost, Whatsapp.