



## GOLD SAVINGS MONITORING APPLICATION AT PT PEGADAIAN

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**Abstract:** In this global era, digital plays a very important role in life now and in the life to come. Because everyone needs digitization, pawn companies are here to provide their best services for the people in Indonesia. Their best services are making it easy to invest and being able to manage money well, Digitalization is very important in today's global era because everyone needs investment from small children to the elderly, with a pawn company that can make it easier for them to carry out activities such as pawning, purchases of precious metals and gold savings. Design and implementation of applications for monitoring gold savings transactions at PT. Pegadaian. The use of applications that underlie this research include Grafana Applications and Agile Methods. Grafana application as an open source sensor monitoring, visualization and analytical system. This method is for software development. Which consists of Requirements, Design, Develop, Test and Deploy.

**Keywords:** Pawn, Digital, Gold Savings, Precious Metals, Grafana, Agile.

## INTRODUCTION

Gold companies are very diverse and the systems used are also very diverse. The gold company PT Pegadaian uses a digital application to create a system in the company so that the system created is optimal for running business processes and services for the community. The system created is the Pegadaian Digital Service which was created in 2017 and Grafana is also here to help companies make business processes and services easier.

Because grafana plays an important role in the smooth running of the pawnshop's business, Grafana is one of the most vital monitoring system applications where its role is very important in doing business and the impact generated by grafana can turn the data into a graph in grafana. As well as questionnaires to 20 respondents who came directly to the user to get secondary data. The respondents are grafana users and gold savings customers who use Pegadaian services.

## LITERATURE REVIEW

The purpose of this research is to create a grafana application for monitoring gold savings. The application is designed and created to find out how many transactions the application success

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rate is on the gold saving dashboard and application performance.

## RESEARCH METHODS

The research flow describes the sequence of the research process in detail and the relationship between a process (graph) and other processes. This research consists of five stages. First Stage: Collaboration and Analysis, Second Stage: Research and Explore improvement, Third Stage: Implementation and Methodology (Agile) then Fourth Stage: review and test performance, finally Fifth Stage: design and implement a monitoring system.

This research begins by analyzing the Existing Process of Monitoring Applications by collaborating with the Developer team or the Architecture and Application Planning Strategy team, to determine which processes will be optimized and become targets for the Monitoring application implementation.

## FINDINGS AND DISCUSSION

**Requirements Stage** This stage is divided into three parts, namely the fulfillment of software, data and hardware and brainware.

### Software (Tools)

The software used in making this application are: Grafana, Prometheus, Elasticsearch, Node Exporter, and MySQL.

- Grafana

Grafana Grafana's open source software makes it possible to query, visualize, remind and understand data wherever it is stored. Grafana is used to create, explore, and share data through an elegant and flexible dashboard.

### Data and Hardware Grafana

- Data

Grafana as an open-source, multi-platform analytical tool and interactive visualization web application can present charts, graphs, and alerts for the web when connected to supported data sources.

- Hardware and software requirements for grafana

The following are the minimum hardware and software requirements to install and run grafana. For this reason, it is necessary to ensure that the operating system, minimum hardware requirements, databases, and web browsers are supported.

- Supported Operating System

The following are supported operating systems for installing Grafana: (a) Debian / Ubuntu. (b) RPM-based Linux (CentOS, Fedora, OpenSuse, Redhat). (c) macOS. (d) Windows. (e) Hardware Recommendations

Grafana does not use a lot of resources and is very light in memory and CPU usage. Minimum hardware specifications that must be met are 255 MB of memory and 1 CPU core. Some features may require more memory or CPU. Features that require more resources include Server-side rendering of images, Alerts, Data Source Proxy, Supported Databases

Grafana requires a database to store configuration data, such as users, data sources, and dashboards. The exact requirements depend on the size of the Grafana installation and the features used. Following are the databases supported by Grafana: SQLite, MySQL, and PostgreSQL.

### Human Resources (Brainware)

Human resources in making this Grafana application are involved in making information systems, collecting and processing data in making Grafana, distributing and utilizing information produced by the Grafana information system, namely user or data analysis.

### CONCLUSION AND RECOMMENDATION

Based on the results of the analysis, the Grafana application for monitoring can properly carry out the function of monitoring Gold Savings transactions with Pegadaian partners. The success of this application is supported by the ability, this application can present data and graphs of total transactions, application success rates, and application failure rates to Pegadaian partners. The information presented by this application becomes input for the Pawnshop management, so that they can continue to monitor Gold Savings activities.

For Pegadaian, it is recommended that the application made in this study be developed so that it can monitor more activities of Pegadaian products that are carried out online or internet-based. In the future, most of Pegadaian's products will be carried out online based on the internet and involve many partners, so monitoring systems or applications will be increasingly needed.

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