

## Demand Requirement: Automated Accounting System for Convenience Store

### Background:

The convenience store in question operates at a mid to large scale, incorporating elements of both a traditional convenience store and a truck stop. It has been discovered that older Verifone Ruby Cash Register models, predating 2014, possess the capability to output Daily/Shift reports to a text file, as opposed to the conventional printed receipt format. Through testing, it has been determined that these text files can be conveniently uploaded to an Amazon S3 bucket via a USB bootable Linux machine. The intention is to transition away from using QuickBooks, primarily due to the manual data entry required, and the excessive features provided by QuickBooks that are not utilized by the business. In opting for a custom Software as a Service (SaaS) solution, the business aims to streamline its accounting processes and ensure cost efficiency over the long term.

### Requirement:

The demand is for the development of a custom SaaS application tailored specifically to the accounting needs of the convenience store. This application should seamlessly integrate with the Verifone Ruby Cash Register's capability to generate Daily/Shift reports in text file format and automate the process of uploading these reports to an Amazon S3 bucket. Additionally, the SaaS application should have robust accounting functionalities, enabling the automated handling of the uploaded reports for accurate financial record-keeping.

### Functional Requirements:

#### Automated Data Retrieval:

The SaaS application must be capable of automatically retrieving Daily/Shift reports generated by Verifone Ruby Cash Registers from designated directories within the connected Amazon S3 bucket.

It should support multiple registers and directories for efficient management of data from various store locations.

#### Data Processing and Accounting:

Upon retrieval, the SaaS application should parse the text files to extract relevant accounting information, such as sales, expenses, taxes, etc.

It should have comprehensive accounting features to organize and manage the extracted data, including the generation of financial statements (e.g., income statement, balance sheet) and customizable reports.

Integration with existing accounting standards and practices should be considered to ensure compliance and accuracy.

Automation and Customization:

The application should allow for the customization of accounting rules and parameters to accommodate specific business needs and regulatory requirements.

Automated processes should minimize manual intervention, reducing the potential for errors and enhancing efficiency.

User Interface and Accessibility:

The SaaS application should feature an intuitive user interface for easy navigation and accessibility.

Role-based access control should be implemented to restrict access to sensitive financial data based on user roles and permissions.

Non-Functional Requirements:

Security:

Strong encryption methods should be employed to secure data transmission between the Verifone Ruby Cash Registers, the USB bootable Linux machine, and the Amazon S3 bucket. Access controls and authentication mechanisms should be implemented to safeguard sensitive financial information stored within the SaaS application.

Scalability and Performance:

The application architecture should be designed to accommodate future growth and scalability, supporting an increasing volume of transactions and data.

Performance optimizations should be implemented to ensure fast and responsive processing of accounting tasks.

Reliability and Availability:

The SaaS application should be highly reliable, with minimal downtime and robust error handling mechanisms in place.

Redundancy and failover mechanisms should be implemented to maintain service availability in case of system failures or disruptions.

Conclusion:

The development of this custom SaaS application will enable the convenience store to streamline its accounting processes, reduce manual workload, and ensure accurate financial reporting. By leveraging the existing capabilities of the Verifone Ruby Cash Registers and

transitioning away from QuickBooks to a tailored solution, the business aims to optimize its operations and achieve long-term cost efficiency.