Metrics Collector Software Design Document

Version <1.0>

Murali Krishna
Vikram Patil
Vikas Nandanam

25-FEB-2016

Table of Contents

1 Introduction

The Software Design Document is a document to provide documentation which will be used to aid in software development by providing the details for how the software should be built. Narrative and graphical documentation of the software design for the project are within the Software Design Document, including use case models, sequence diagrams, collaboration models, object behavior models, and other supporting requirement information.

1.1 Purpose

The purpose of the Software Design Document is to provide a description of the design of a system fully enough to allow for software development to proceed with an understanding of what is to be built and how it is expected to be built. The Software Design Document provides information necessary to provide description of the details for the software and system to be built.

1.2 Scope

Metrics collector is an application which gathers process metrics from various sources such as running processes on the machine, elapsed time, memory used by the process etc. This application will also collect information about the CPU utilization by the various processes. Application will have a GUI to represent the collected information to the user. Software will be provided with a relational database which will store the metrics data and generate customized reports for the user.

1.3 Pre-requisites

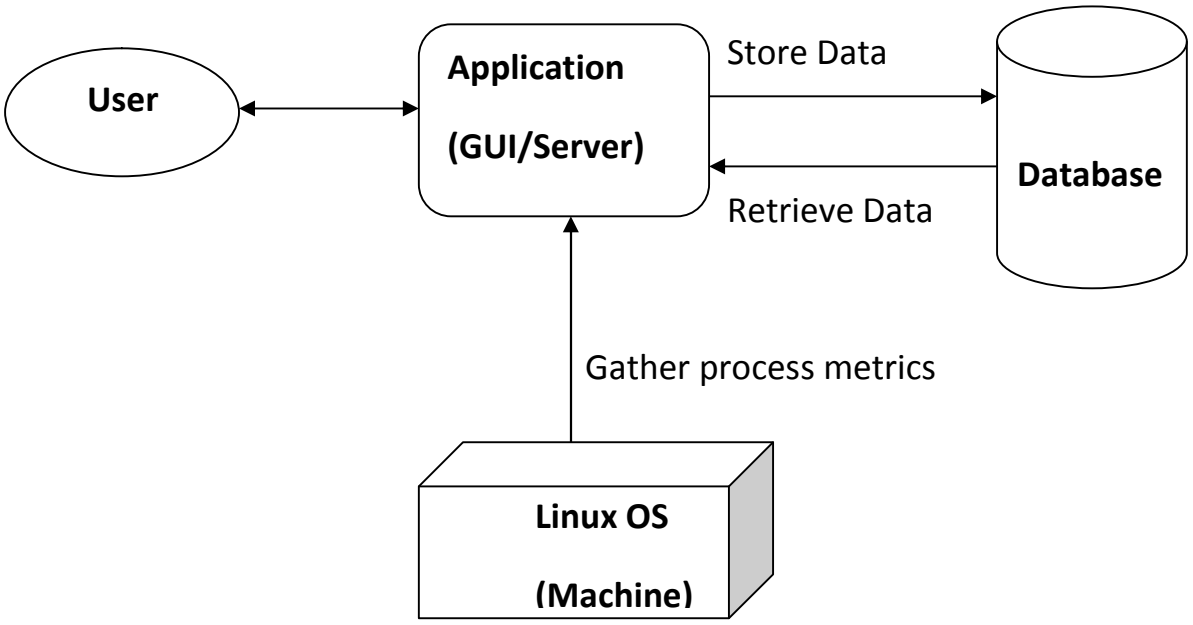
a) Linux OS (Any of Redhat, CentOS)
b) JRE for JavaFX (application program and GUI)
c) MySQL database (relational database)
d) IDE (NetBeans 8.0.2)

2 Design Overview

2.1 Introduction

The Design Overview is section to introduce and give a brief overview of the design. The System Architecture is a way to give the overall view of a system and to place it into context with external systems. This allows for the reader and user of the document to orient them to the design and see a summary before proceeding into the details of the design.

2.2 System Architecture



Above figure gives a high end view of the system architecture and various actors involved in it. User interacts with the Metrics Collector application through GUI. Application gathers process metrics information from the operating system to show it to the user and store in the database. As per user's requirement, application queries the database and retrieves data in a report format. Reports are the provided to the user through GUI.

3 System Interfaces

3.1 User Interface

The user interface for the system will allow the user to easily generated documents, search for documents, and modify documents. The user should be presented with all main functions on the first user interface page to allow for the user to select the function to use without the need to navigate inward to find it. This desktop application GUI will be developed in Java with JavaFX platform.

3.2 Software Interface

The software will need to interface with a database management system to pull data from it and push data updates to it. The connection will be a standard database connection using JDBC.

4 Non-Functional Requirements

4.1 Performance Requirements

- Software must be able to respond quickly to user's commands. Software must represent correct and most recent process metrics without delay.
- Internal database queries must be tuned perfectly to give non-redundant reports.
- The system should be able to hold and search through large amounts of data