

# The Application Architecture of YEROTH-ERP-3.0

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**Abstract**

This document describes the architecture of our ERP software-system YEROTH-ERP-3.0. This document also explains the reasons for our choice to design and build YEROTH-ERP-3.0 as a thick-client application, as opposed to currently more popular web-browser-based applications.

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	Thick-client application	Web-browser-based application
application security vulnerability	very good (use of a single harmonized programming language)	very bad (use of several disparate technologies)
application business code installation and upgrade	on each computer	only on the web / application server
user interface installation and upgrade	on each computer (thick-client gui)	on each computer (web-browser)
user interface development	WYSIWYG tool	manual coding
application networked architecture	1-tier architecture	multi-tier architecture
other involved software-systems	at least 1 (DBMS)	at least 2 (DBMS, web / application server)

Table 1: Thick-client application VS Web-browser-based application

## 1 Introduction

YEROTH-ERP-3.0 is an **Enterprise Resource Planing (ERP)** software that aims 'effectiveness' and 'simplicity', compared to other high ranked ERP software-systems (e.g.: 'Sage Gescom i7', 'SAP Business One', etc.).

We chose to design and implement YEROTH-ERP-3.0 as a thick-client software-system because of the following reasons:

- 1) the implementation language C++ offers much flexibility (use of macro, etc.)
- 2) the availability of 'WHAT YOU SEE IS WHAT YOU GET' tools (WYSIWYG) for fast and useful user interface design (e.g.: Qt designer [Com20], miniStudio (vxWorks) [WEI20], etc.)
- 3) the low number of computers involved with the operation of a thick-client software-system (1-tier architecture), as opposed to a web-browser-based software-system (at least a 2-tier architecture).

## 2 Thick-Client VS Web-Browser

Table 1 compares a thick-client application against a web-browser-based application.

## 3 YEROTH-ERP-3.0 Upgrade Deployment

### 3.1 Debian-Linux

### 3.2 Windows 10

## 4 Conclusion

## References

- [Com20] The Qt Company. Qt Designer Manual. <http://doc.qt.io/qt-5/qt designer-manual.html>, 2020. Last accessed on September 4, 2020 at 15:20.
- [WEI20] Yongming WEI. miniStudio User's Guide. <http://www.minigui.net/en/ministudio>, 2020. Last accessed on September 4, 2020 at 15:20.