

# PRODUCTIVE ENTERPRISE RESOURCE PLANNING USING CLOUD

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**Abstract:-**Each company has its own goals, processes and requirements. Above all, today's businesses need fully functional technologies that can bridge the gap between business processes and individuals. An Enterprise Resource Planning(ERP) system provides help by synchronising all information and communication within the organisation to successfully run a large organisation consisting of multiple departments and teams. ERP is a combination of software and operations management activities of the company. The entire project value chain is aligned with ERP software and critical processes are efficiently streamlined. For each and every small business out there, it is difficult to maintain all the resources and data. My proposed system follows an efficient and organised architecture to plan and manage all the resources of an enterprise in cloud. Through this idea, a single server can manage all the data of an enterprise.

**Keywords:** Enterprise Resource Planning, Cloud, CRM, Software as a Service.

## I. INTRODUCTION

Enterprise resource planning (ERP) is the integrated management of core business processes, often in real time, through software and technology. It mainly refers to organisation's systems and software packages used to manage daily business activities such as accounting, procurement, project management, and manufacturing.

ERP systems are designed with a common, defined (schema) data structure that usually has a common database. Using common constructs, definitions and common user experiences, these systems provide access to company data from multiple activities.

Instead of several standalone databases with endless inventories of disconnected spreadsheets, this

System bring order to the chaos so that all users to create, store, and use the same data derived from common processes. With a secure and centralised data repository, everybody in the organisation can rest assured that the data is correct, up-to-date and complete.

For each task performed throughout the organisation, data integrity is assured, from a quarterly financial statement

to a single outstanding receivables report, without deploying error - prone spreadsheets.

It is impossible to ignore the impact of ERP in today's business world. As company data and processes are corralled into ERP systems, companies can align separate departments and improve workflow, resulting in substantial savings in the end.

## II. EXISTING SYSTEM

ERP adoption grew rapidly from the 1990s to the beginning of the 21st century, with more organisations relying on ERP to streamline core business processes and improve data visibility. At the same time, the cost of implementing ERP systems began to rise. Not only were hardware and software on - site expensive capital investments, business ERP systems often required additional cost of custom coding, consultants, and training.

Meanwhile, with new features and functionality, such as embedded analytics, ERP technology has evolved to embrace the internet. As time went on, many organisations discovered that their on - site ERP systems, such as smartphones, could not meet modern security requirements or emerging technologies.

## III. PROPOSED SYSTEM

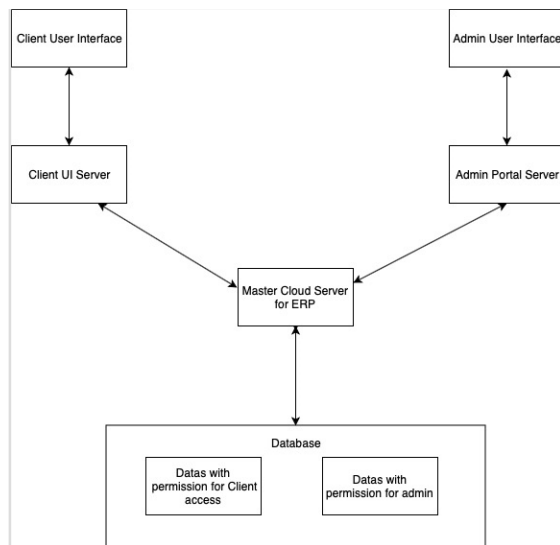
ERP in cloud is efficient for business and it develops software - as - a - service (SaaS). If ERP software is "in the cloud," it simply means that it is kept on a remote server network, rather than at the location of a company. The cloud provides a more affordable alternative to ERP that reduces both operating expenses and capital expenses because it eliminates the necessity for companies to buy software and hardware or hire additional IT staff. With no expensive infrastructure to support, resources can be invested in opportunities for growth. Employees can shift their focus to more value - added tasks from managing IT.

While past legacy ERP systems were often too costly for small to medium - sized enterprises (SMBs), that barrier has been broken by the cloud. Smaller firms can leverage the same proven, industrial - strength ERP software that larger firms have used for years with a distributed cloud ERP system.

A cloud - based ERP solution can be implemented quickly. Cloud ERP offers the flexibility to easily add new

users and to support all the changing business needs for small to medium - sized enterprises looking to innovate quickly and seize new business opportunities.

**SYSTEM BLOCK DIAGRAM**



**Figure 1: System Block Diagram**

**IV. MODULE DESCRIPTION**

The overall architecture includes the cloud server, the database, client UI, admin portal and the server for the admin portal. The admin portal contains tools which can be used by the admin or any other company officials for ERP. The functionalities of all the tools are defined in the back-end of the server.

This server is connected with a relational database which contains all the documents for the website. All the documents are made easy via the user interface of the clients. When the client enters the data in the Client front-end server, the data is transferred from that server to this database and it is then saved.

After saving this document, admin can verify it through his UI. The data's in the database are interconnected in many ways in which the data's are related properly. All the servers which are mentioned above can be a part of a main domain

**Admin Portal:**

Admin portal is the interface through which the admin access the server to maintain it. This and the client UI is completely different as this contains all the necessary tools and environment to manage all the resources

The interface is made in such a way that it is easy for the admin to use it. It is connected to the ERP cloud server through which the admin can access the database. The database returns the data for which the admin has permission to access.

**Client Front-End Server:**

The Client user interface is the interface through which all the other users other than the admin access the ERP cloud server. The client have permission to access only a limited amount of resources compared to the admin. So when the request is sent to the ERP server, it access the database and returns the data for which the user has access to.

**Cloud Server:**

This is the ERP server in which all the functionalities and application for the ERP are present. Both admin and client have the access to this server. Other than the client and the admin, many other roles can be set for different type of users. For all the other type of roles, different permissions can be set.

**Database:**

The database contains all the datas regarding the enterprise. Each and every data are set with permissions that only a particular type of user can access. Datas in the databases are connected through their primary key. The user access the cloud server for getting the data. If they have permission to access, the server retrieves the data from the database and sends it back to the user.

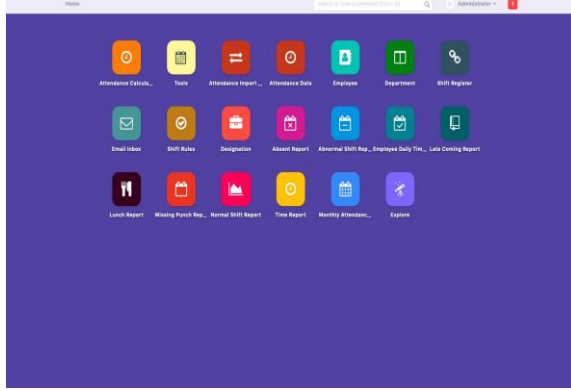
**Upshots:**

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tabLetter Head
tabModule Def
tabMonths
tabNewsletter
tabNewsletter Email Group
tabNote
tabNote Seen By
tabOAuth Authorization Code
tabOAuth Bearer Token
tabOAuth Client
tabPage
tabPatch Log
tabPayment Gateway
tabPortal Menu Item
tabPrint Format
tabPrint Heading
tabPrint Style
tabProperty Setter
tabReport
tabRole
tabRole Profile
tabSMS Parameter
tabSalutation
tabSeries
tabSessions
tabShift Register
tabSingles
tabStandard Reply
tabTag
tabTag Category
tabTag Doc Category
tabToDo
tabTop Bar Item
tabTranslation
tabUnhandled Email
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tabWorkflow
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tabYear
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131 rows in set (0.00 sec)
MariaDB [6843d89bab53783c]> select * from
    
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**Figure 2: Database containing all data's of an Enterprise.**

All the data's in the database are connected to each other in a different relation according to the document model made.



**Figure 3:** This Image shows the portal for the admin to access.

## V. CONCLUSION

In this project, Distributive Productive Enterprise Resource Planning using the cloud, it is easier to create and maintain all the data of resources of a company in an efficient manner. This architecture separates the central ERP system and the UI (Front-end) and runs them in a separate server. This makes it easier for the developers to segregate and continue the development in a different place. The admin portal contains all the necessary tools for the administrators, employees, and managers to implement the work of their respective roles. Each role is given specific permissions so that they cannot access the data which they don't have authorised to access. If the given enhancements are implemented, it will be easier for the small scale and middle scale companies to plan and manage their resources. This is assured from the above analysis and works. The project titled Distributive Productive Enterprise Resource Planning using cloud has been tested with sample resource. This system is scalable and flexible for all kinds of business.

## VI. FUTURE WORK

While cloud ERP has many advantages, it also has few advantages. It is easy to control the flow and management of all the data in the database. But when the company moves to another place or when it creates a new branch in a different place, it is difficult to migrate all the data from one place to another. So a migration feature for all the data's must be included.

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