

TECHNOLOGY VISION AND VIABILITY

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ABSTRACT

Internet and mobile channels are capable of being deployed quickly and reliably, delivering a rapid return on investment. TEMENOS T24 (T24) is a front-to back-office, CRM and product lifecycle management software platform that powers core banking operations. Consistently ranked as the first or second best-selling core banking software platform worldwide for the past 14 years (International Banking Systems Sales League Table), T24 has been developed using a complete service oriented architecture that's modular.

Keywords: internet mobile, return investment, banking operation

Introduction

Temenos delivery scalable, high performing solutions to meet retail banks' needs for core processing, regulation and compliance, internet and mobile channels, and reporting. They are capable of being deployed quickly and reliably, delivering a rapid return on investment. TEMENOS T24 (T24) is a front-to back-office, CRM and product lifecycle management software platform that powers core banking operations. Consistently ranked as the first or second best-selling core banking software platform worldwide for the past 14 years (International Banking Systems Sales League Table), T24 has been developed using a complete service oriented architecture that's modular so banks can deploy and integrate the required functionality alongside the needs of their business. Running 24/7 and in real-time, it equips you for the banking technology and market challenges of today and tomorrow. T24 can be implemented and managed on premise or deployed as software-as-a-service (SaaS) – a cloud based delivery model. SaaS offers quick, easy access to T24 core banking software without the need of significant internal IT resources and expensive infrastructure, making it the ideal deployment choice financial institutions that wish to move fast without the burden of complicated in house IT systems.

Seamless Integration

T24 integrates seamlessly with both back office data and self-service channels to provide a consistent customer experience. It is completely compatible with our existing banking systems, enabling us to deploy and control a flexible range of multi-channel, next generation banking services for the customers-efficiently, securely, cost effectively and profitably.

T24 can be implemented as a model bank version with built-in industry best practice processes, or as a highly configurable version that Temenos tailors to our specific requirements, ensuring efficiency and compliance with all internal and external regulations – or as a combination of both

Business Efficiency

T24 is based on an advanced technology architecture that provides platform independence, real-time interfaces, extreme usability, high performance, excellent productivity for configuration and deployment and modular components. It has the flexibility to support the needs of any bank – from the smallest Greenfield operation to the largest multinational.

T24 has an unrivalled track record worldwide in

- Reducing the cost of ownership
- Enhancing productivity
- Mitigating risk
- Expanding channels to market
- Lowering costs
- Improving customer service
- Optimizing up-sell and cross-sell opportunities
- Driving growth
- Boosting profitability

Open Standards

- Coded to provide a balance of high performance, extensibility and upgradeability, T24 is based on industry standards. Hardware and database agnostic, T24 runs as a message – driven bean in Java standard JEE application servers.
- Applications can interact with T24 through industry standard data or web services interfaces and can integrate with T24 using event-driven messages.
- T24 has its own browser-based user interface providing responsive design for desktops, tablets and smartphones. Being platform-agnostic means banks can choose the best vendor or environment for their needs, and change without altering their T24 investment, maximizing its longevity. T24 users can also tailor their functionality and flexibility without compromising their ability to upgrade to later versions. T24 provides highly productive design tools for model-driven development and change deployment.

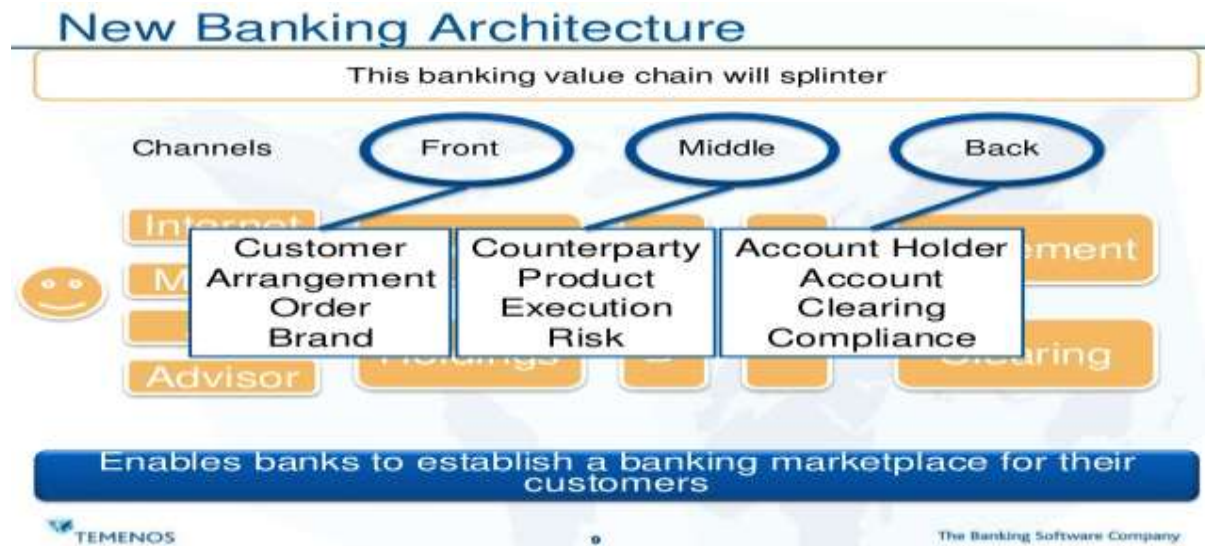
Temenos T24's core banking solutions include

Core processing

- T24 is a massively scalable straight-through-processing solution. Robust transaction processing engines facilitate highly automated transaction recycling mechanism, plus protection from unwanted costs and potentially fraudulent transactions.

Regulation and Compliance

- T24 provides an IFRS solution with the capability to classify and measure financial instruments, recognize the profit and loss, enable full disclosure, as well as supporting your local GAAP accounting treatment. It also provides support for regulatory frameworks, such as Base II and III, and regulatory reporting including:
- FATCA compliance (for US-source income), through comprehensive functionalities relating to client identification, calculation of the withholding tax and reporting requirements.
- MiFID compliance, through a process that ensures trades are placed on MiFID-compliant stock exchanges and are executed at the best price.



MOTIVATION

MOTIVATION

Temenos motivates to extend the product leadership supported by both a professional services group and a strong partner ecosystem, delivering success for customers, consistent, profitable growth for the company and providing a great place for employees to realize their ambitions.

CORPORATE SOCIAL RESPONSIBILITY

The global fund for children (GFC) envisions a world where all children grow up to be productive, caring citizens of a global society. They work to advance the dignity of children worldwide, pursuing this mission by making small grants to innovative community-based organizations working with many of the world's most vulnerable children and youth.

GFC helps where help is needed the most, working at grassroots level, finding home-grown organizations that are already making a difference on the grounds. They understand their communities' unique needs and have the entrepreneurial vision to meet them. The support of donors enable these organizations to make a lasting impact on children's lives and funds are utilized to help GFC's grantees grow bigger, better and stronger. GFC provides its grantees with capital management support, training and leverage to help them grow and succeed. Then they can reach even more children in need for years to come – and the value of their donors' investment continues for generations.

Reasons for customers choosing Temenos Software

- ✓ Sustainable cost.
- ✓ Economies of scale.
- ✓ Lower asset provision.
- ✓ Greater control and lower compliance cost.
- ✓ Low cost, highly automated scalable systems.
- ✓ Robust controls and workflows coupled with complete and real-time analysis of risk at customer and firm levels.
- ✓ Rapid launch of personalized products across multiple channels.

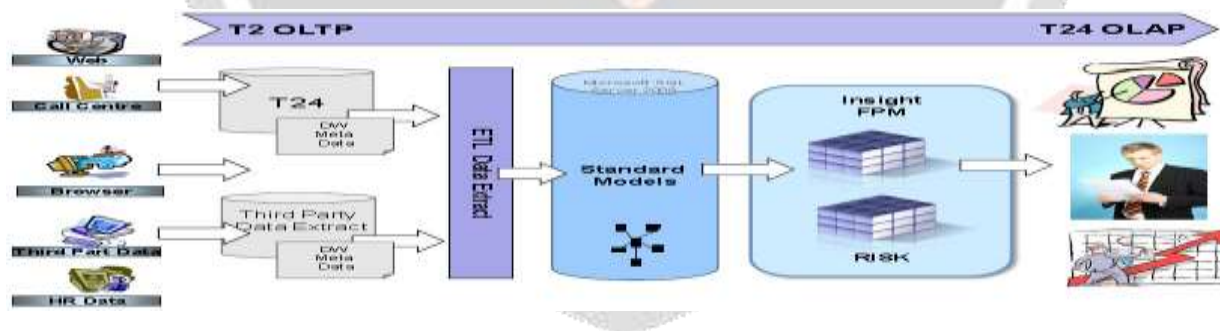
SECURITY

Due to the nature of software products there is an inherent exposure to damage or loss of source code and IP through the following types of events:

- ✓ Incursion of Temenos systems by malicious software or illegitimate access from either internal (including partner entities) or external sources. This may result in theft or insertion of spyware/malware
- ✓ Loss of data due to data corruption, power failure, accidental or malicious destruction/deletion.
- ✓ IP and source code are protected through various control systems, including but not limited to; a restricted production environment limiting interaction with general IT infrastructure, access restrictions, data backup, data security and legal protection through contractual agreements with customers and partners.

This focus on streamlining the underlying IT infrastructure acts to minimize potential vulnerabilities, improve performance and strengthen the resilience to attacks through a tightly controlled low complexity IT environment the reduction in under-utilized systems also generates increased savings due to reduced maintenance and monitoring. Continuous product testing during development and targeted penetration testing for Temenos' IT environments provides additional comfort over the degree of vulnerability to information.

Theft or piracy of Temenos IP is also a significant risk consideration and is protected through physical and logical protections as well as use of copyright law, contractual clauses and processes which provide strong documented evidence in the event of litigation.



TECHNOLOGY REQUIREMENT-HARDWARE

As banks enhance online and mobile chance in response to competition and user demand, they must successfully address risks associated with authenticating their customers and employees. Strengthening security and compliance is an on-going challenge. HID Global's Active ID appliance gives bank using temenos connect internet banking a unique advantage by accelerating the using of strong authentication. This is accomplished

by delivering an appliance pre-configured for TEMENOS T24 (T24) and temenos connect internet, a hardware security module (HSM) and versatile authentication server all in one cost effect solution.

Active ID appliance provides a complete, versatile authentication solution for banks seeking to easily add authentication, from user name and password to a variety of strong authentication mechanisms. The Active ID appliance adds strategic value by giving banks deploying TEMENOS T24 and temenos connect internet the flexibility to meet current and future needs for a range of user, device and service-channel options. The appliance shortens the deployment time with temenos internet connection banking software, allowing banks to confidently bring innovation products and services to market across multiple service channels. Securing lower cost service channels drives economically profitable growth for adopting institutions.

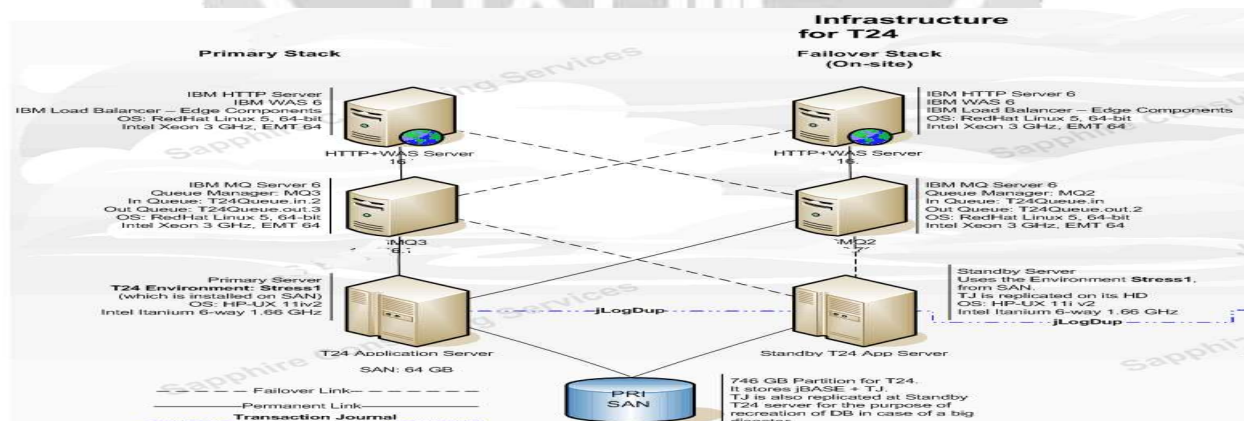
Active ID appliance capabilities includes

- Trusted and secure electronic channels that motivate customers to move to more flexible and lower cost service channels.
- Strong authentication that addresses user demands for convenience for profitability, while reducing the cost of fulfillment and management.
- Streamlined compliance via a centralized audit trail for customer transactions across channels and products.
- The ability to quickly deploy additional layers of security to address new threats.
- Pre-configured of easy deployment with T24 and temenos connect internet.
- Automatic creation for user credentials when new users are added via T24 screens.
- Management of password lock/unlock and other critical authentication processes directly from T24.

ACTIVID APPLIANCE BENEFITS

- Low total cost of ownership (TCO) in a competitively priced all inclusive package.
- Accelerated time to production for banks using TEMENOS T24 and connect internet.
- Streamlined administration leveraging TEMENOS T24 console.
- Proven expertise and repeated success with temenos T24 banking environments.

HARDWARE INFRASTRUCTURE



TECHNOLOGY REQUIRMENT-SOFTWARE

T24 Triple' A plus interface software

T24 with Triple 'A plus offers an integrated multichannel front to back office private banking solution, which provides sophisticated portfolio management functionality, such as modeling, performance attribution portfolio risk to hire net worth and ultra-high net worth clients, align to comprehensive bank office support and the unparalleled breadth of the product coverage of T24.

FEATURES

- Portfolio Management and Analysis.
- Portfolio Rebalancing.
- Advanced Performance Analysis.
- Portfolio Risk.
- Position Management.
- Full order processing, settlement and accounting.
- Corporate Action Suite.
- Static Data (Customer, Portfolio, Instruments, Prices, etc.) maintained in T24 and automatically synchronized with Triple' A Plus`

SQL SOFTWARE

TEMENOS T24 (T24) is one of the most technically advanced banking systems available today. The testers were run on the database and application system using SQL server 2005 Enterprise Edition (64-bit), and Quad- Core Intel Xeon 5365 series processors. The solution also included a pair of Dell Power Edge 1950 servers and a storage area network (SAN).

SECURITY OF SQL

- Data Security is a top priority among financial service providers. The Security capabilities of SQL Server are well known:
- SQL database administrators can control access to all areas of the system by group and user levels. Since most users need to develop reports for a single department, they receive read-only access to certain portions of the database, increasing the danger of inadvertent data amendments or information breaches.
- Strict password policy enforcement including long passwords and password- expiration policies help further prevent unauthorized access.
- SQL Server encrypts data at all levels. The database itself can be encrypted, as can communication to and from the system. Even database-sourced information on a user's workstation can be encrypted.
- Incorporated with advanced password protection. SQL Server denies access to computers lacking the encryption capabilities required to securely retrieve information.

FEASIBILITY

Temenos T24 'software-as-a-service' (SaaS) gives any user, anywhere in the world, the ability to use all or part of T24 as a service without having to own the hardware, physical environment, application software or database.

This translates into many benefits for an organisation including:

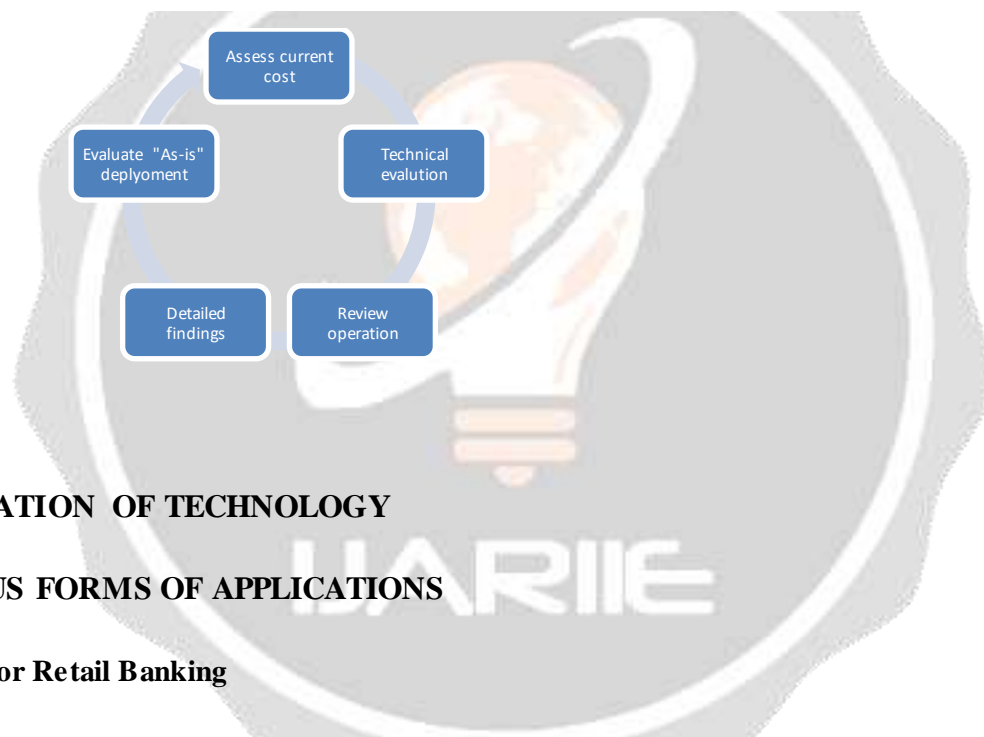
- Reduced costs.

- Reduced operational risk.
- Avoidance of infrastructure upgrade cost spikes.
- Improved compliance.

For customers who are contemplating the move to SaaS, Temenos offers the SaaS Readiness Assessment; a review of the current T24 deployment that determines the feasibility of moving to the Temenos SaaS model and the process required to achieve this goal. The proposed Assessment service is carried out over a period of one week and focuses on evaluating the existing T24 deployment model, covering four critical areas - business alignment, organisation, infrastructure and application complexity, in order to gauge its suitability as a T24 SaaS candidate. The Assessment will identify gaps that may exist between the current “As-is” state and the required “To-be” state, identifying key next steps based on the businesses’ specific requirements. If a move to SaaS is confirmed as viable, the Assessment will provide the basis of a subsequent offer by Temenos to “Upgrade to SaaS”.

During the Assessment, the Temenos team will visit the client’s site to:

T24 SaaS Assessment process



APPLICATION OF TECHNOLOGY

VARIOUS FORMS OF APPLICATIONS

T24 for Retail Banking

T24 is used to support more than 250 retail banking operations ranging from the largest international banking groups to community banks and start-ups. T24 offers full retail functionality, from the front through to the back office, including CRM and product life cycle management. Unparalleled scalability and resilience is combined with total customer centricity.

T24 for Corporate Banking

T24 provides integrated support on a single global platform to corporate and wholesale banks offering services to professional and corporate clients. T24 enables banks to introduce new business models quickly and add value to their client relationship. Support includes coverage of corporate credit, correspondent banking and cash management, payments, treasury services and trade finance.

T24 for Private Wealth Management

T24 supports banking for affluent to high net worth individuals by providing excellent middle and back office support for the widest range of financial products from the simplest fund and equity instruments through to structured products, complicated options and hedge funds. Dealing is electronic and real-time and settlement is efficient and electronic. A wide range of actions are supported out of box and further actions can be constructed using flexible, parameter based tooling.

TEMENOS PRODUCT SUITE

Temenos Connect

Temenos Connect is a suite of front end channel products that fully interact with other temenos system such as T24 but can also work with any other host back end system. Temenos connect enables financial institution to provide front end banking solutions with a superior user experience across multiple distribution channels, for any user (internal and external) in any

Temenos Connect Mobile is fully integrated with temenos connect internet banking, providing seamless mobile banking across a wide range of mobile channels including smart phone apps, browser and SMS. Temenos Connect Mobile is underpinned by a unique device specific security layer providing the ultimate solution for protection from mobile fraud. The solution capability integrates retail and other payment channels to transform devices into a mobile point of sale.

Anti- Money Laundering

AML screen provides an integrated watch list screening solution enabling banks to manipulate and manage watch lists, and define screening rules. These enhanced tools help maximize the chance of identifying true positives whilst minimizing instances of false positives, to achieve a more efficient and effective AML operation

INNOVATION

Innovation Group

Innovation Group expands range of Multi-Platform User Interfaces through Partnership expansion with Temenos. Innovation Group, a global provider of software solutions to P&C Insurers, will deliver an expanded and enhanced channel experience across multiple devices, through an extension of its strategic partnership with leading provider Temenos.

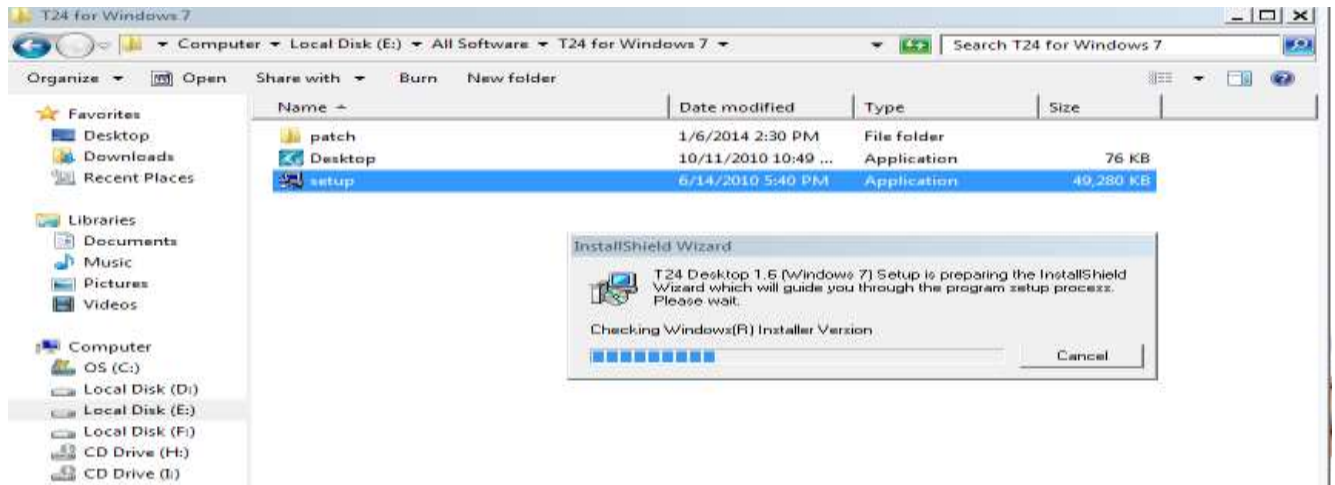
Integrating Temenos' User Experience Platform (UXP) edge Connect with its core 'out of the box' Insurer Suite, Innovation is able to deliver function-rich, adaptable user interfaces that Insurers can easily rebrand and customize.

Partnership expansion follows successful client implementations in both the UK and US where Insurers were able to develop customer enhancements faster and apply these across all major devices without the cost of investing in multiple solutions; future-proofing operations in a rapidly changing market.

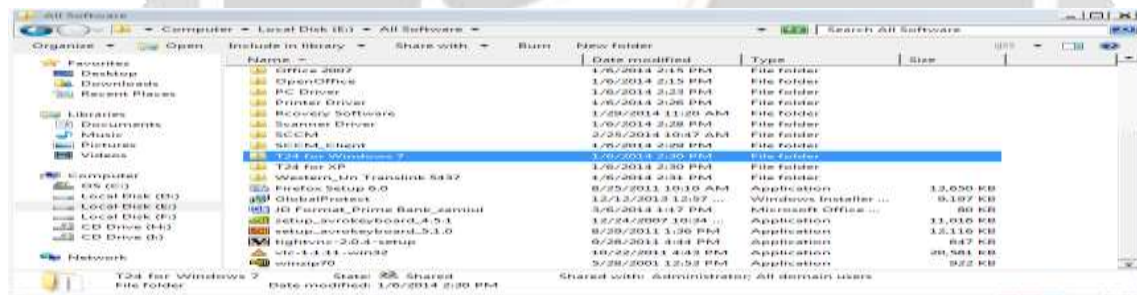
Customers are looking to access products and services whenever they wish through whatever device they have access to at the time. This places challenges on Insurers to deliver these services in a consistent and responsive way,

INPUT AND OUTPUT ANALYSIS

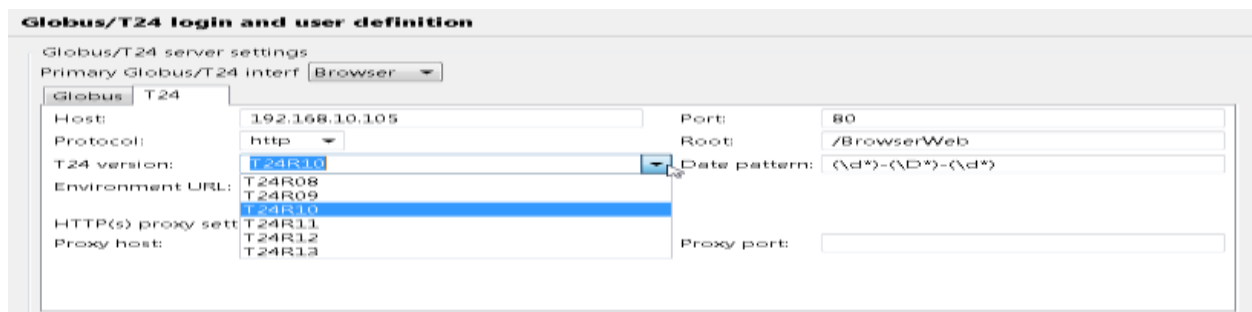
STEP-1



STEP-2



STEP-3



CONCLUSION

Temenos is the market leading provider of mission critical software to financial institutions globally with more than 1,600 installations in over 150 countries worldwide. Temenos software provides financial institutions with a single, real-time view across the enterprise, enabling them to maximize returns while streamlining costs. Temenos software if implemented in India it would be boon to Indians. This project report helps in knowing about the software's design, work structure and various analyses. Thus implementation of temenos software in India would not only be a great success but also would be the best implemented technology for the country people.

