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OVERVIEW

This document explains the components of the RePOS solution and the interaction that takes place between them.

Rombus have been involved with EPOS till systems for 15 years and by combining knowledge of existing EPOS and accounting systems Rombus has redesigned how EPOS systems operate.

With RePOS you can integrate directly into an accountancy and CRM system, track stock levels, incorporate and record customer information. With automatic updates using click once technology your system always has the latest fixes, updates, modifications and patches.

RePOS has been designed to work with modern organisations at the heart of its development to cater for operation over wide area networks and use the latest technology.

WHY REPOS

INTEGRATION

Traditional EPOS systems suffer from segregation when multiple sites become involved, expensive software and additional hardware has to be purchased to link these multiple sites together.

Traditional EPOS systems are reliant on a master or till controller when the assigned till in the outlet controls the other tills in the outlet, however what happens if the master till fails? Traditional EPOS systems have very little integration or additional functionality.

The customisable nature of the RePOS solution allows you to buy a system that is suited to the needs of your business. This software can constantly record sales, update stock levels, and provide accurate pricing information, whilst also helping to provide a fast and efficient service to customers.

At the centre of the RePOS solution is an accounting database that provides:

1. Inventory management and stock control.
2. Customer accounts and sales analysis.
3. Banking
4. Nominal ledger control

RePOS provides direct integration to this accounting database, when a sale transaction is performed on the RePOS interface, the transaction is posted into the accounting database, into the nominal ledger and stock levels adjusted.

The accounting database also provides a plug in architecture; API and web services have been developed by Rombus to allow further integration into or from other systems.

From the SQL database transactions can be moved onwards into other legacy systems used by the organisation, as required.

CONTROL

As RePOS has been designed to be an integrated solution, when a transaction is made, the stock levels are automatically adjusted, the invoice posted and payments posted into the accounting database.

RePOS offers real time stock control and account balances. If an item is searched or scanned in RePOS the quantity is displayed and the stock level reduced when the item is sold. A stock taking module allows end users to keep their stock levels defined and the levels adjusted are sent back to the accounting database.

End users can define their own shelf levels which are either automatically adjusted, or require approval, purchase orders can then be automatically created based upon these defined levels.

The accounting database also provides built in business intelligence and reporting to help users identify product, supplier and stock trends. It draws attention to stock levels of top performing products, so you can ensure you have adequate supplies, whilst at the same time, shows product lines that are not doing so well. The suite gives management control over products, pricing, suppliers, customers and stock.

Every transaction that takes place in RePOS is logged in the accounting database. For example a sale transaction in an outlet will log the details listed below, and post an invoice and sales receipt in the accounting database, as well as update the stock levels of the items sold.

1. User
2. Till ID
3. Outlet ID
4. Transaction type
5. Amount

Reliability

RePOS removes the need for any extra hardware to allow the system to work. There is no till controller or Master till setup required, and in the event of a connectivity failure, the till system will continue to function.

Behind each version of RePOS is a database and windows service that constantly checks the connection to the web services of RePOS. If the connection to the services becomes unavailable then the transactions are stored locally until the connection is resumed.

Any updates to the till are distributed using 'click once' to instantly update all outlets with the latest RePOS version.

ACCESSIBILITY

RePOS has been designed with the understanding of how modern organisations operate, and it caters for multiple sites over distributed areas.

The accounting suite client allows connections over a Wide Area Network (WAN) so clients can be installed on devices and the accounting database accessed from anywhere with an internet connection.

The components behind RePOS are all designed for hosting environments. Rombus can cater for any cloud or hosting requirements using the fault tolerant data centre setup with backup.

FLEXIBLY

Need to add more users to the system or open up new outlets, the RePOS solution can quickly be deployed onto EPOS hardware as well as more conventional pc setups. ID's for user accounts at outlets are centrally managed as well as modules which can be configured centrally for all users.

RePOS allows price updates, product changes, stock adjustments all to be centrally managed and deployed to all the RePOS interfaces at scheduled times.

Support

Rombus has been supporting accounting suite packages for over 15 years, and decided to integrate the RePOS into the accounting database.

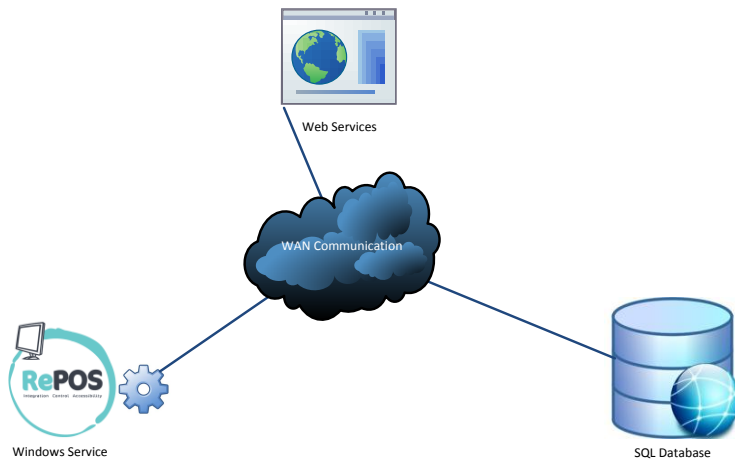
The client can choose to use the accounting interface provided by Interprise or can link the accounting database to existing internal systems.

The accounting suite is ISO 9001 accredited and also backed by the Institute of Chartered Accountants.

REPOS COMPONENTS

The RePOS solution is made up the following components:

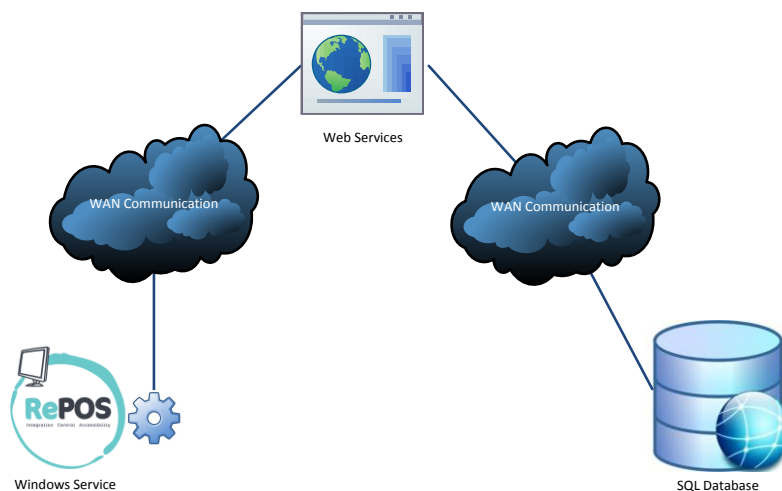
- 1) RePOS
- 2) Windows service
- 3) Web services
- 4) Database
- 5) Accounting suite interface client (if required)



Each component of RePOS has been developed and chosen specifically to allow operation over a Wide Area Network (WAN) to provide flexibility for deployment and operation.

The communication from RePOS is through the web services, the data is compressed and uses SSH. If the database is held at a different location to the web services then the web services can work over both a WAN or LAN connection.

When deploying the RePOS solution, the web services are the hub of communication with everything flowing through them.



TECHNICAL REQUIREMENTS

REPOS INTERFACE

The recommended requirements for RePOS are:

1. 2 GHz CPU or greater
2. Windows 7
3. 2 GB Framework
4. .Net Framework 4
5. Windows installer 3.1
6. 80GB HD
7. SQL Express
8. Microsoft Web Service Enhancements 3.0 Runtime

The minimum requirements of RePOS are:

1. 1 GHz or CPU greater
2. Windows XP Professional SP3
3. .Net Framework 4
4. Windows installer 3.1
5. 1GB Memory
6. 80GB HD
7. SQL Express
8. Microsoft Web Service Enhancements 3.0 Runtime

WEB SERVICE

1. Windows server 2003 or above
2. IIS 6
3. .Net Framework 4
4. Possible SSL certificate

ACCOUNTING SUITE HARDWARE

The Interprise Suite application requires the following hardware:

Server Client Only Installation

1. CPU: 1.2 GHz or greater
2. RAM: 1 GB recommended
1. Disk space: 10 GB available hard disk space

Server Only Installation

1. CPU: 2 GHz Pentium processor
2. RAM: 2 GB recommended
3. Disk space: 10 GB available hard disk space

Client and Server installation on same machine

1. CPU: 2.6GHz processor
2. RAM: 2 GB recommended
3. Disk space: 10 GB available hard disk space

ACCOUNTING SUITE SOFTWARE

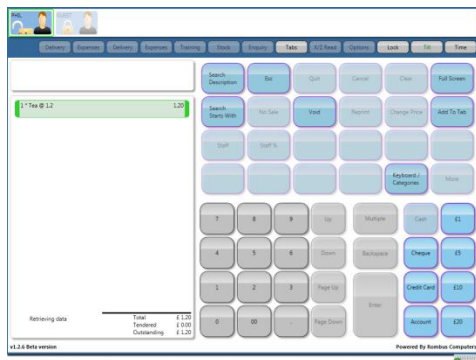
Client only Installation

1. Operating systems
 - a. Microsoft Windows XP with Service Pack 2,
 - b. Windows Server 2003 or above,
 - c. Microsoft Small Business Server
2. SQL Express SQL 2005 or above
3. Microsoft .NET Framework 2.0
4. Microsoft Windows Installer 3.1
5. Microsoft Web Service Enhancements 3.0 Runtime

Server only installation

1. Windows Server 2003, 2008, Microsoft Small Business Server 2003, 2008, 2011
2. SQL Server 2005 Workgroup edition or above
3. Microsoft .NET Framework 2.0
4. Microsoft Windows Installer 3.1
5. Microsoft Web Service Enhancements 3.0 Runtime

REPOS COMPONENTS



RePOS is the till interface which users interact with to serve customers in an outlet. Access for users is determined by the user account selected and the password entered.

The interface is designed to work with touch screen as well as a conventional keyboard and mouse setup.

The RePOS interface is written in .net and has two additional components that make it work.



The windows service TillData runs when windows is loaded and continually checks to see if there is a connection available to the web services. If a connection is available then the service looks at the local database till.mdb and then sends any transactions up to the web services.

Product update schedules are defined with the RePOS options and stored in the accounting suite. At the time defined, the service queries the web service to see if any new products are available and updates any products which have had price changes.

The windows service is updated if required with new releases of RePOS.



On the C drive there is a till.mdb file that is used to store the products and transactions. When RePOS is first installed, products are pulled down from the accounting suite and stored in the database. From then on, when product updates are run, amendments or new products are also added in.

If there is no connection to the web services, transactions are stored locally and marked as un-posted. When the connection is restored, the transactions are posted into the accounting suite and then marked as posted.



The accounting database is the core component that stores all the transactions that take place in RePOS. It provides one place for central management of the whole system and reporting functionality.

TRANSMISSION INFORMATION

Every version of RePOS has an options module which is only accessible by users with administrative privileges.

The communication from RePOS to the portal (web service) is determined by the transmission information. A username and password is required to unlock the transmission information and shop ID.

Portals and shop IDs are associated with a password. When a password is authenticated, this enables the shops and portals that are associated with the account to be selected.

Sales URL: This is the URL that is used to communicate with the accounting suite database



The screenshot shows a web form titled "Transmission Info". It contains the following fields and controls:

- Company:** Text input field containing "0000".
- Password:** Text input field.
- Portal:** Dropdown menu with the selected value "http://repos.rombus.com/repos/repos.asmx".
- Shop:** Dropdown menu with the selected value "ASH1".
- Buttons:** "Go" button next to the Password field, and "Apply" button below the Shop dropdown.

LOCAL LOGGING

In case of connectivity failure and for logging purposes RePOS stores information locally.

The main repositories are at:

Windows 7: C:\ProgramData\Repos

Windows XP: C:\Documents and Settings\All Users\Application Data\Repos

Both operating systems, service information: C:\Repos\Service

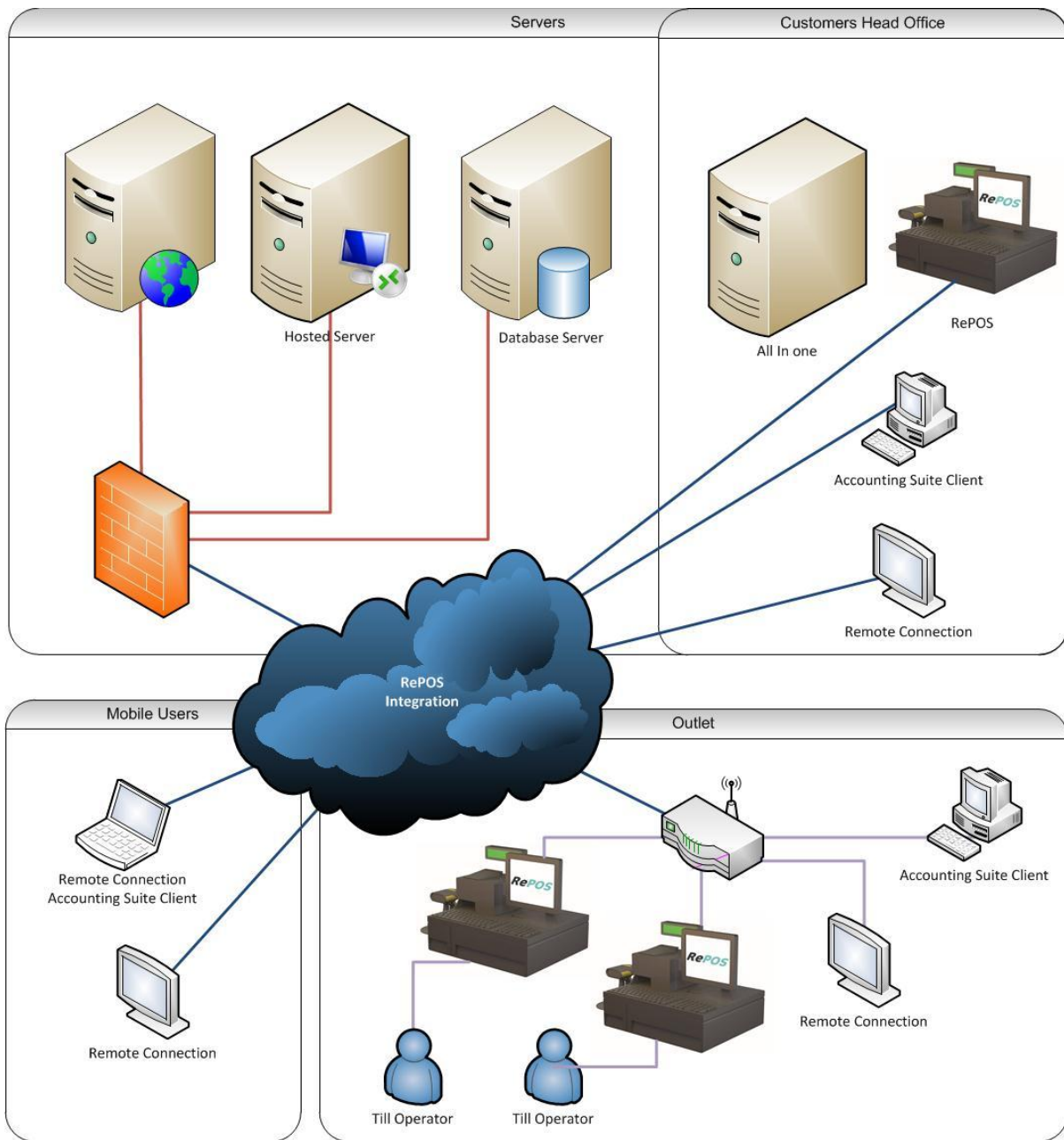
PROGRAM DATA

The program data folder locally stores details of:

1. Account Payments
2. Log Files – service and products
3. Product Updates
4. Sales information
5. Sent data
6. Sent till roll data
7. Latest Prices
8. Error log file

DEPLOYMENT

All the components that make up the RePOS solution are designed to work over a LAN or WAN connection.



The topology above is to give an example of how RePOS can be deployed.

SERVERS

Depending on client requirements and setup, the web service and database server can be deployed on separate servers, with communication between them through a LAN connection. It is best practice to have web services and the database communicating through a LAN connection.

If RePOS is being deployed in a data centre setup, then a hosted server can be used to allow external access through a terminal services environment. For example, end users could log onto a terminal server to access the accounting client and other applications they have hosted.

Depending on the reseller agreement, Rombus can host the web services, database and provide a terminal server if required.

CUSTOMERS HEAD OFFICE

A customer may have their own servers or server that they wish to use to host the web services and database. Some customers may have dedicated servers for different roles, in that case the web services and database can be setup on different servers or just one server to provide the whole solution.

Depending on server location, head office users can connect to the accounting client using a direct LAN connection if the database is hosted locally, or use a WAN connection.

Head office users may have a 'beta release' of RePOS that can be subject to testing by an EPOS or IT team before allowing deployment to the outlets.

Head office users can also connect to the hosted server to access the accounting suite and any other applications that they have.

MOBILE USERS

Mobile users refer to users who may not have a permanent workstation or place of work but are members of the organisation. This type of user may apply to area managers who are responsible for more than one outlet.

These types of users can have the accounting client installed on their laptops so they can access the accounting suite database. Alternatively with a hosted solution a mobile user can use a laptop to remotely connect to a hosted server and access the client once logged on.

OUTLET

Outlets will have RePOS installed on EPOS or appropriate hardware with the transmission options configured to allow communication to the web services.

If an outlet requires access to the accounting client, then, just as the mobile users do, they can either connect using a remote desktop connection, or have the accounting client installed over a WAN.

WEBSITE INSTALLS

For RePOS there are 3 web sites that are used for testing and deployment.

1. RePOS Development
2. RePOS Beta
3. RePOS live

The development service is used internally by Rombus to develop RePOS and test any new releases.

The Beta version is available for selected customers, who in larger deployment scenarios may wish to beta test the system before authorising a live release to outlets.

Live RePOS is used to deploy RePOS in a production environment.

SUMMARY

The overall idea is to make the system robust and provide flexibility to the customer.

The RePOS software is written in .net and has local services running constantly, calling web services that are installed on the web server at the data centre. The services on the web server then query the database server.

The accounting database is a SQL database. This is stored on the database server, client interface is used to connect to the database, either through a LAN or WAN connection. The terminal server in the diagram is an example to demonstrate how the accounting package can be accessible from anywhere with an internet connection, if a hosted solution is desired.

Head office can then either use RDP connections on a thin client to connect to the hosted server, or have the client accounting suite software installed locally. The client will connect to the database over a WAN connection. If customers have their own data centre or head office setup, the services and software can be installed, giving the customer the desired topology that they desire. The system is designed to offer flexibility to the customer.