# Sage VIP



## **Technical Information & System Requirements**

Premier Employment Self Service (ESS) September 2016

## **Table of Contents**

Technical Information & System Requirements	1
Premier Employment Self Service (ESS)	. 1
September 2016	1
Table of Contents	. 2
Premier Employee Self Service (ESS)	3
Basic ESS Architecture	4
ESS Application Installation	8
Publishing the ESS Website	. 9
Backups	9
Updates	9
System Requirements - ESS Workstations	. 10
System Requirements - Server	. 11
Disaster Recovery	13
Frequently Asked Questions	14
System Requirements Sign Off	15
Addendum - Payroll System Requirements	16
Payroll Architecture	17
Installation Scenarios	20
System Requirements - Workstations	. 24
System Requirements - Server	. 25
Rackune	26

## Premier Employee Self Service (ESS)

The Premier ESS Application is a web based application that allows employees' access to certain Payroll and HR information as stored and maintained within the Premier Payroll Application.

Employees may be granted access to some or all of the features available, which include:

- · Viewing and editing of Personal Details,
- · Viewing and editing of Family Information,
- Viewing Leave Balances and applying for Leave,
- · Viewing pay slips,
- Viewing IRP5s and
- · Completing Performance Review forms.

### Note:

The Premier ESS Application is only compatible with the Premier Payroll and Premier HR Applications.

### **Basic ESS Architecture**

The Sage HR & Payroll Premier ESS Application comprises of three application level components and two service components.

The application level components consist of the following:

### **VIP Premier Payroll**

The ESS Application queries the Premier Payroll data files for all employee master data, leave transaction history, new transaction parameters and much more.

For Payroll System Requirements, please see the Addendum to this document.

### Microsoft SQL Server

User accounts as well as current and historical workflow transaction data is stored in the Microsoft SQL database. ESS configuration data is also stored in this database.

### Microsoft Internet and Information Services (IIS) Web Server

The IIS Web Server publish the ESS application to your corporate intranet so that end users may access the application using their web browser.

The application level components can be consolidated on a single server, or distributed on multiple servers as required.

#### **Best Practice**

The recommended best practice for a Premier ESS installation is to segregate the VIP Premier Payroll data and ESS SQL database from other enterprise data to add an additional layer of security.

The VIP Premier Payroll data is stored in proprietary Cobol-based ISAM files and the Premier ESS data is stored in a SQL database.

Confidential information such as payslip data and passwords are encrypted in the SQL database. By segregating this data, a higher level of security can be achieved.

It is NOT recommended that the ESS Application be installed on servers that perform other business critical functions, e.g. Domain Controllers or Exchange Servers.

The service components installed are:

### **Premier ESS Payroll Comms Service**

This service is the link between the Premier ESS Web Application and the VIP Premier Payroll data. All data requests from the Web Application are handled by this service and the relevant payroll data is extracted from the VIP Premier Payroll data files and passed back to the Web Application. This service is also used to update the VIP Premier Payroll data files on final approval of requests originating from the Premier ESS Application.

### **Premier ESS Process Service**

This service consists of three services integrated into one physical service.

### **Router Service**

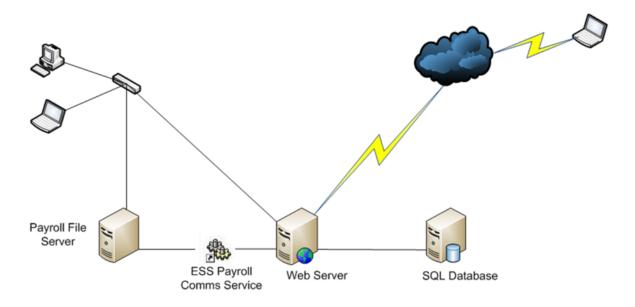
The router service handles all the communication between the various ESS services and the ESS web application.

### **Workflow Service**

The workflow service handles all requests submitted to workflow for approval and updates the SQL database accordingly. This service also generates the e-mail notifications that are sent to the relevant users during each step of the workflow.

### **Payslip Service**

The payslip service monitors the VIP Premier Payroll data, and on creation of the payslip data files, this service updates the Microsoft SQL database with the relevant data. IRP5 data is also handled by this service.



### **Additional Application Requirements**

The Premier ESS Application is reliant on a number of other applications which are the client's responsibility to provide, configure and make available to the end users of the Premier ESS Application.

These applications are:

### **Web Browser**

Users interact with the Premier ESS Application via a web browser from their own or a communal workstation. Microsoft Internet Explorer 7.0 is the recommended browser, however the application is compatible with most common browsers e.g. Mozilla Firefox 3.0

### **Mail Server**

The Premier ESS Application notifies users of new transactions or changes to transaction status via e-mail. The Premier ESS Application forwards these e-mails to your corporate mail server for distribution to the relevant users. It is therefore necessary to configure your mail server to allow mail relays from the ESS Application server. SPAM filters should also be configured to "white list" all e-mail generated by the ESS Application.

Emails are sent using the standard SMTP protocol.

### **E-mail Client**

All users should have access to an HTML enabled e-mail client. All transaction notifications to users and approvers are sent via e-mail.

While it is recommended that each user have access to a PC and have their own e-mail address, there are situations where this is not possible. It is then recommended that users have access to communal PC's to facilitate use of the application. In these situations e-mail notifications are usually routed to their supervisor or other designated party.

### **Security / Encryption**

Financial information (pay slips and IRP5s) is encrypted within the ESS database using Rijndael encryption. Rijndael is a block cipher, which means that the cryptographic key and algorithm are applied to data in a block rather than in individual bits. It is an alternative to a stream cipher. The cipher handles data in 128 bit blocks and supports 128, 156, and 192 bit keys. ESS uses 128 bit keys. Database connection strings within the application configuration files can be optionally encrypted using the same encryption.

### **Authentication**

Authentication is the process by which the Application verifies the identity of the user attempting to accessing the application.

The ESS Application makes use of the Microsoft SQL Membership Provider Class of ASP.net for Forms Authentication.

Alternatively Active Directory Authentication can be configured if the client has an existing Microsoft Active Directory infrastructure.

### **Authorisation**

Authorisation is the function of specifying access rights to resources within the Application.

Premier ESS users are restricted in terms of which areas of the application they are allowed to access on a menu basis linked to application roles granted by the ESS Administrator.

This extends to workflow approval, reporting, impersonation and informational screens throughout the application.

### **Password Security and Policies**

When Forms Authentication is used, user passwords are stored using the Hash password format with the SHA1 algorithm (Secure Hashing Algorithm) of SQL Membership Provider. SHA1 is the default used. The hashed format passes a user's plaintext password and a random salt value through a one-way hash algorithm before storing the password. To validate a password, the provider has to salt and hash the entered password and compare the two hash values. A hashed password cannot be retrieved.

Premier ESS provides for the following password policies when using Forms Authentication.

Rule	Definition
Password Length	Can be defined to be any minimum length. Default is 6 characters.
Password complexity	Specify the number of non-alphanumeric characters required in password. Default is 0
Account Lockout	User accounts are automatically locked after five failed password attempts.
User Session Timeout	A user's browser session will timeout after the IIS defined interval. Default is 15 minutes.

### **ESS Application Installation**

Installation of the Premier ESS Application will be done by a VIP Technical Consultant, however, a representative of the clients IT department will need to be available at all times during the installation process.

It is the responsibility of the clients IT department to ensure that the server(s) meet or exceed the minimum <u>system</u> <u>requirements</u> as provided by Sage HR & Payroll. The server(s) must be correctly configured prior to the VIP Technical Consultant beginning with the Premier ESS Application installation.

### **Pre-requisites - Server(s)**

The server(s) on which the various components of the Premier ESS Application are to be installed must meet or exceed the minimum system requirements.

To facilitate a smooth installation of the Premier ESS Application, the following tasks can be performed by your IT department before the arrival of the VIP Technical Consultant.

- Configure the Windows 2008/2008 R2 Server as a Web Server and enable ASP.net
- Install latest service packs (e.g. SP2) if applicable
- Install Microsoft .net Framework 3.5 with SP1
- Install Microsoft .net Framework 4.0
- Install a separate instance of SQL 2005 / 2008 / 2008 R2 for ESS. E.g. servername\ess (If corporate security policies require this)
- Setup an ESSAdmin user account with local administrative permissions, as well as network permission to the Premier Payroll data files. This account is used by the various ESS Services. The account password should be set to never expire, to ensure uninterrupted operation.
- Ensure that a SQL account is available with sysadmin permissions to the SQL database.
- Ensure that the mail server will accept SMTP relays from the Web Server that will host the ESS Application.
- Compile a list of server names and IP addresses for the servers to be used.

### **Pre-requisites - Workstations(s)**

Employees using the Premier ESS Application require workstations that meet or exceed the minimum <u>system requirements</u> for workstations.

### **Additional Information**

- Premier ESS cannot be installed on Linux or other non-Windows operating systems; this is due to the fact that various Microsoft components are required.
- Premier ESS must be installed on IIS 7.0 or above. No other web server can be used.
- It is NOT advised to install Premier ESS on a Domain Controller, Exchange Server or any other business critical server. A dedicated server for the Premier Payroll and Premier ESS applications is recommended.

## Publishing the ESS Website

In certain circumstances, it may be necessary to publish the Premier ESS website to a public IP address, i.e. the Internet, to allow users access to the Premier ESS website from other locations and external networks.

To ensure the integrity and security of the Premier ESS data, it is recommended that the following security measures are implemented:

- An SSL certificate be purchased by the client and installed on the Premier ESS web server. This will ensure
  that communication between the web server and client workstations is encrypted and reduces the risk of hacking.
- The web server be adequately firewalled to prevent hacking and ultimate access to the underlying VIP Premier Payroll and SQL data. Hosting the Premier ESS web site within a DMZ, with the VIP Premier Payroll and SQL data on the private side of the DMZ is recommended.

It is the clients responsibility to ensure that the network configuration is properly configured to manage the risks of publishing the Premier ESS application to a public URL.

### **Backups**

It is the responsibility of the clients IT department to ensure that regular (daily) backups are made of the SQL database and the VIP Premier Payroll data.

Full backups are recommended as recovery from incremental backups is time consuming and not always successful.

The following SQL databases specific to the ESS application must be included in the backup:

- GuESS
- GuESSDoc

Each of the Premier ESS services has configuration files that should also be included in the backups to speed up the reconfiguration process after a reinstallation.

The following Premier ESS Service configuration files must be backed up:

- · Genesis.Ess.Server.exe.Config
- Genesis.Ess.VipCommsServer.exe.Config
- · Genesis.Ess.HRCommsServer.exe.config
- Web.config

## **Updates**

From time to time updates to the Premier ESS Application will be made available to clients for download from the Customer Zone of the Sage HR & Payroll website, www.vippayroll.co.za

The update will always be accompanied by installation instructions as well as additional information about the changes that are incorporated in the update.

## System Requirements - ESS Workstations

The table below details the minimum system requirements for workstations that will access the Premier ESS Application.

Premier ESS Workstations		
	Minimum	Recommended
Processor	Prentium 4, 2.4GHz or higher	Dual Core 3.0 GHz or higher
Memory	1 GB	2 GB
Screen Resolution	1024 x 768	1024 x 768
Network Card	100 Mbps	1 Gbps
Web Browser	Internet Explorer 8	Internet Explorer 11, Mozilla Firefox , Google Chrome
Supported Operating Systems	Windows 7 (Home editions not supported)	Windows 7 Windows 8 / 8.1 (Home editions not supported)
Other Requirements:		
PDF Reader (Adobe Reader 8 or high	ner)	

Email Client capable of viewing HTML emails (e.g. Microsoft Outlook 2007 or later)

### **Assumptions**

The system requirements described in this document are based on configurations that have been successfully tested by the Sage HR & Payroll Quality Control team during their ongoing testing of the Sage HR & Payroll Payroll applications.

It is the responsibility of the clients IT department to combine these system requirements with those of other applications that users may have installed on their workstations to ensure sufficient resources are available.

### Note:

Microsoft support for Windows XP has been officially discontinued. While our application(s) may still run on Windows XP it is strongly advised that all workstations be updated to a minimum of Windows 7 with IE9.

### System Requirements - Server

The table below details the minimum system requirements for the Premier ESS Web Server

Premier ESS Web and Database Server		
	Minimum	Recommended
Processor	Dual Core 3.0 GHz or higher	Quad Core 3.0 GHz or higher
Memory	2-4 GB	8 GB
Available disk space	40 GB	80+ GB
Screen Resolution	1024 x 768	1024 x 768
Network Card	100 Mbps	1 Gbps
Supported Operating Systems	Windows Server 2008 R2 x64 with IIS 7.5 ASP.net Role enabled	Windows Server 2008 R2 x64 with IIS 7.5 ASP.net Role enabled Windows Server 2012 R2 x64 with IIS 7.5 ASP.net Role enabled
Other Requirements:	,	
Database Software	SQL Server 2008 R2 Express*	SQL Server 2008 R2 Standard SQL Server 2012 Standard SQL Server 2014 Standard
Web Browser	Internet Explorer 8 Mozilla Firefox Google Chrome	Internet Explorer 11 Mozilla Firefox Google Chrome
CD / DVD ROM / USB 2.0 Port Microsoft .net Framework 3.5 SP1 Microsoft .net Framework 4.0 Microsoft .net Framework 4.5		

### Assumptions

The system requirements described in this document are based on configurations that have been successfully tested by the Sage HR & Payroll Quality Control team during their ongoing testing of the Premier ESS Application and are based on an employee count of approximately 500.

It is the responsibility of the clients IT department to combine these system requirements with those of other applications that may be installed on the servers to ensure sufficient resources are available.

- \* The SQL Instance Collation should be set to: Latin1\_General\_CI\_AS
- \* The Express versions of SQL Server have limitations with regards to memory and CPU usage (1GB RAM and 1CPU) as well as the maximum size of each database (10GB for SQL 2008R2 Express) These limitations may impact on the performance of the application when large numbers of users access the application.

### **Best Practice**

The recommended best practice for a Premier ESS installation is to segregate the VIP Premier Payroll data and ESS SQL databases from other enterprise data to add an additional layer of security. The SQL Databases can be hosted on a separate instance of SQL if necessary.

It is NOT recommended that the ESS Application be installed on servers that perform other business critical

functions, e.g. Domain Controllers or Exchange Servers.

### Best Practice - SQL Database

It is advisable to ensure that the SQL Server version chosen will provide sufficient storage and performance for the solution being implemented.

Consult your Database Administrator and relevant documentation provided by Microsoft.

SQL Best Practices - http://msdn.microsoft.com/en-us/sqlserver/bb671432

SQL Storage Best Practices - http://technet.microsoft.com/en-us/library/cc966534.aspx

SQL 2008 R2 Feature Comparison - http://technet.microsoft.com/en-us/library/cc645993.aspx

## **Disaster Recovery**

In the event of a server failure, the client will be responsible for providing the most recent backups of the various databases, configuration files and file shares as detailed in this document.

The VIP Technical Support consultants will provide the client with the most recent install files for the relevant VIP applications licensed to the client.

The VIP Technical Support consultant will provide the necessary assistance to re-install and reconfigure the applications. This assistance can be provided either via remote assistance or on site, depending on the client's location and requirements. This assistance will be charged at the normal consulting rates applicable at the time.

## Frequently Asked Questions

### Q: Are any specific user rights required to run the software?

A: As with most software applications, local administrator rights are required to install the software initially as well as install updates. Day to day operation of the software requires normal user rights.

### Q: Is Windows Small Business Server Supported?

A: Installation of Sage HR & Payroll software on Windows Small Business Server is not supported. Small Business Server typically functions as a Domain Controller, Mail server, Database server and SharePoint server. Sage HR & Payroll applications are not tested on Small Business Server.

### Q: What is ODBC?

A: ODBC (Open Data Base Connectivity) is a very powerful tool that provides users with the ability to extract data from the Sage HR & Payroll Applications for report generation in Microsoft Excel, Word or similar ODBC capable applications.

All versions of Sage HR & Payroll Payroll Applications ship with the required ODBC drivers and configuration tools.

In order to make use of VIP Business Intelligence Manager (BIM) and ODBC, Microsoft Office is required. The components that must be installed include MS Excel (with MS Query), MS Access and MS Word. Microsoft Office 2007 or above recommended.

## Q: Do the Sage HR & Payroll Payroll Applications run successfully on Novel Netware solutions?

A: The Sage HR & Payroll Applications are only tested on Microsoft Windows based networks.

### Q: Is Microsoft Windows XP supported?

A:Microsoft support for Windows XP ended in April 2014. Therefore all Sage HR & Payroll application will no longer be supported on Windows XP and any earlier versions of Microsoft Operating Systems.

### Q: Is Microsoft Windows Server 2003 supported?

A: Windows Server 2003 R2 and all earlier versions of Microsoft Server Operating systems are no supported.

### Q: Are Linux, Unix or Mac OS supported?

A: Linux, Unix and Mac OS are not supported.

## System Requirements Sign Off

By signing this document, you confirm that you have reviewed the system requirements documentation for the Sage HR & Payroll application(s) that your company is purchasing.

This documentation would have been supplied along with the sales documentation for the application.

If you require a copy of the system requirements documentation, this can be obtained from the Sage HR & Payroll Technical Support desk on 012 420 7379 or <a href="mailto:ess@vippayroll.co.za">ess@vippayroll.co.za</a>

Declaration:
I, in my capacity as have reviewed the system requirements documentation for the following application(s) which my company has purchased from Sage HR & Payroll.
Tick all that apply
Premier Payroll
Premier Employee Self Service
Premier HR
By signing this document you agree to the have the above equipment available for Sage HR & Payroll to install the application(s) on dates arranged with the person designated as the project owner for this installation.
Fax this signed document to 086 509 6202 or email to <a href="mailto:ess@vippayroll.co.za">ess@vippayroll.co.za</a>
Sage HR & Payroll reserves the right to terminate the installation at any time if the minimum system requirements specified are not met.
Signature
Company Name
Date

## Addendum - Payroll System Requirements

Sage HR & Payroll has an AcuCobol based Payroll Application designed to meet the needs of all businesses which integrates with the Premier Employee Self Service Application.

The Payroll Application is primarily used by members of the Payroll and/or Human Resources (HR) department(s) to complete payroll processing, leave administration and various other statutory tasks.

### Payroll Architecture

The Payroll application is a single tier application with the program and data files residing in a single location.

The Payroll data is stored in ISAM data files that are encrypted using proprietary encryption algorithms housed in the AcuCobol runtime libraries.

### **Security**

Payroll data is, along with financial business information, quite possibly one of the most sensitive corporate data stores. The data is prone to hack attempts and intrusion from many potential sources, including but not limited too: existing employees, disgruntled employees, IT personnel, database administrators, external malicious hackers and many other sources.

As such, much time, thought and careful design has gone into the VIP security sub-system and data storage models to eliminate as far as possible data compromise and manipulation. Any security system design is in many ways dictated by both the operating system on which the application is designed and deployed as well as the database technology in which data is stored. VIP is no different in this regard.

Securing the VIP Payroll data can be achieved by adding various layers of security, for example:

### **Layer 1 - Physical Security**

This can be achieved by installing the Payroll Application onto a dedicated server, and restricting access to this server and associated workstations to authorised personnel.

The client is responsible for the implementation of this layer of security.

### **Layer 2 - Network Security**

Network access to the payroll file share on the server should be limited to the direct users of the payroll application itself. For example, Payroll and HR practitioners normally exposed to salary data, the salary data capture clerks, wage administrators, personnel managers etc.

Access to the server at operating system level should also be limited to authorised personnel only.

The client is responsible for the implementation of this layer of security.

### **Layer 3 - Application Security**

All Payroll data, including the user access permission sub-system, is stored in proprietary AcuCorp COBOL ISAM data files. This data is encrypted using proprietary encryption algorithms housed in the AcuCorp run time libraries. This encryption uses a byte transformation algorithm unique to every byte in the file.

### **Authentication**

Authentication is the process by which the Application verifies the identity of the user attempting to accessing the application.

### Best Practice

Each user that will access the Payroll Application should be assigned their own unique username

### password.

The Premier Payroll Application has a password policy that requires passwords to comply with minimum strength, length, expiry and re-use specifications.

Authentication data is encrypted during the authentication process.

### **Authorisation**

Authorisation is the function of specifying access rights to resources within the Application.

Payroll users can be restricted in terms of which areas of the application they are allowed to access. This can be done on a menu, modular and in some instances field level basis. This extends to data capture, reporting and informational screens throughout the application.

An extension of the authorisation model is the use of zone codes within the application. Data within the Payroll may be segmented into many "Zones" or logical collections which could represent departments, business units, organizations or any other logical grouping of payroll employees.

This data is then exposed or hidden from end-users depending on their "Zone" access rights granted in the Application Security Layer. In this way, multiple users of the application may have access to certain employee records and not to others. Each user is allowed access to one or more data "Zones" in the application.

## **Password Security and Policies**

Premier Payroll provides for the following password policies:

Advanced Access Control		
Rule Definition		
Password Length	Can be defined to a maximum of 15 characters	
Password complexity	Specify if password must be ONLY Alpha, ONLY Numeric or Alpha-Numeric	
Password reuse	Number of unique passwords to be used before original password may be re- used	
Password expiry	Passwords can be set to expire after 30,60 or 90 days	
Account Lockout	User accounts are automatically locked after three failed password attempts.  Can be changed	

Global Access Control (Premier Only)		
Rule	Definition	
Password Length	Can be defined to a maximum of 15 characters	
Password complexity	Specify if password must be:	
	ONLY Alpha,	
	ONLY Numeric	
	Alpha-Numeric	
	Upper Alpha, Lower Alpha AND Numeric Characters Only	
	Upper Alpha, Lower Alpha AND Special Characters Only	
	Upper Alpha, Lower Alpha, Numeric AND Special Characters	
	Upper Alpha, Numeric AND Special Characters Only	
	Lower Alpha, Numeric AND Special Characters Only	
Password reuse	Number of unique passwords to be used before original password may be reused. (Maximum 20 times)	
Password expiry	Passwords can be set to expire after 30,60 or 90 days	
Account Lockout	User accounts are automatically locked after specified failed password attempts. Up to 9.	
Multiple Logins	Allow same user to log in more than once – Yes/No	
Username and password the same	Allow User name and Password to be the same – Yes/No	

### **Installation Scenarios**

This section details the most common installation scenarios with regards to the VIP Payroll Applications.

### **Standalone Installations**

Where the Payroll Application is installed on a single workstation, the default install location is usually one of the following, dependent on which product has been installed:

C:\Classic

C:\Premier

### **Folder Security**

All user accounts that require access to the Payroll Application must have Full Control permissions set on the folder where the Payroll Application has been installed. These permissions must also apply to descendent folder and files.

### **Desktop Shortcut**

Each user that requires access to the Payroll Application will have a desktop shortcut that references the Payroll Application executable.

The typical syntax of the Target line for this shortcut will be:

C:\<folder name>\wrun32.exe -s -c cblconfi vipsal.acu

### **System Requirements**

All workstations that will be accessing the Sage HR & Payroll Payroll application should meet the system requirements for a standalone installation as detailed in the workstation system requirements section.

#### **Peer-to-Peer Installations**

Where the Payroll Application is installed on a peer-to-peer network, one workstation typically acts as the host and the other workstation(s) act as the client(s).

The client workstations need access to the files on the host workstation. This is typically achieved by creating a file share on the host and then creating a mapped drive from the client workstation to this file share.

#### **Best Practise**

In order to create an organised folder structure for the client workstations, it is recommended that an additional level be added to the folder structure on the host workstation. For example:

c:\Payroll\Premier\

The c:\Payroll\ folder is then shared on the network.

When browsing the host workstations file system from the client workstation, the "Payroll" share should be visible. A mapped drive is then created to this share e.g. v:\

### **Folder Security**

All user accounts that require access to the Payroll Application must have Full Control permissions set on the folder where the Payroll Application has been installed. These permissions must also apply to descendent folder and files.

### **Desktop Shortcut**

A desktop shortcut to the Payroll Application executable is created on each client workstation.

The typical syntax of the Target line for this shortcut will be:

v:\Premier\wrun32.exe -s -c cblconfi vipsal.acu

### **System Requirements**

All workstations that will be accessing the Sage HR & Payroll Payroll application should meet the system requirements for a standalone installation as detailed in the workstation system requirements section.

### **Client-Server (LAN) Installations**

Where the Payroll Application is installed on a client-server network on a Local Area Network (LAN), a file server acts as the host with various workstations connecting to the host.

The client workstations need access to the files on the file server. This is typically achieved by creating a file share on the server and then creating a mapped drive from the client workstation to this file share.

#### **Best Practise**

In order to create an organised folder structure for the client workstations, it is recommended that an additional level be added to the folder structure on the file server. For example:

D:\Payroll\Premier\

The D:\Payroll\ folder is then shared on the network.

When browsing the server file system from the client workstation, the "Payroll" share should be visible. A mapped drive is then created to this share e.g. v:\

### **Folder Security**

All user accounts that require access to the Payroll Application must have Full Control and Sharing permissions set on the folder where the Payroll Application has been installed. These permissions must also apply to descendent folders and files.

### **Desktop Shortcut**

A desktop shortcut to the Payroll Application executable is created on each client workstation.

The typical syntax of the Target line for this shortcut will be:

v:\Premier\wrun32.exe -s -c cblconfi vipsal.acu

### **System Requirements**

All workstations that will be accessing the Sage HR & Payroll Payroll application should meet the system requirements for a standalone installation as detailed in the workstation system requirements section.

The file server hosting the Payroll Application file share should meet the minimum server system requirements.

### Wide Area Network (WAN) Installations

Where the Payroll Application is installed on a Wide Area Network (WAN), the same procedures as a Local Area Network installation should be followed, with the exception that users outside of the LAN will need to access the Payroll Application using Remote Desktop Services (formally Terminal Services) or Citrix.

Users that need to access the Payroll Application via a VPN, APN, 3G or similar scenarios will also need to access the Payroll Application using Remote Desktop Services (formally Terminal Services) or Citrix.

### Best Practise

It is recommended that Remote Desktop Services be installed on the same server as the Payroll Application.

### **System Requirements**

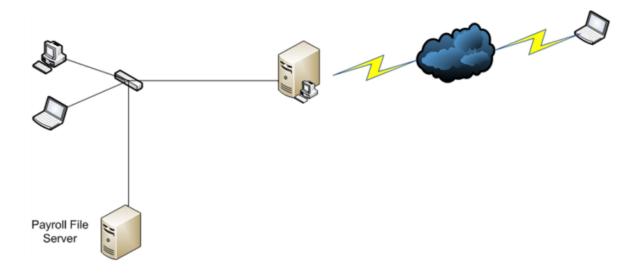
All workstations that will be accessing the Sage HR & Payroll Payroll application should meet the system requirements for a standalone installation as detailed in the workstation system requirements section.

The file server hosting the Payroll Application file share should meet the minimum server system requirements.

It is the responsibility of the clients network administrator to ensure the Remote Desktop Services (Terminal Services) server has sufficient capacity to service the total number of remote users that may access the server via Remote Desktop Services (Terminal Services) or Citrix. A minimum of 500 MB RAM should be available for each concurrent user of the Payroll Application.

Microsoft Office (32 bit) and PDF Printer drivers may also need to be installed based on the requirements of the Payroll users.

Additional requirements for Remote Desktop Services (Terminal Services)or Citrix should be determined by your network administrator, taking into account other application that may be installed and used on the server e.g. Microsoft Office



### System Requirements - Workstations

The table below details the minimum system requirements for workstations that will run the Payroll Application.

Minimum	
Millimum	Recommended
Pentium 4, 2.4GHz or higher	Dual Core 3.0 GHz or higher
1 GB	2 GB or more
1024 x 768	1024 x 768
100 Mbps	1 Gbps
Windows 7	Windows 7
(Home editions not supported)	Windows 8 / 8.1
	Windows 10
	(Home editions not supported)
20 GB	40 GB
	Pentium 4, 2.4GHz or higher  1 GB  1024 x 768  100 Mbps  Windows 7  (Home editions not supported)

Other Requirements:

CD / DVD ROM / USB 2.0 Port

Microsoft .net Framework 2.0 SP2

Microsoft .net Framework 3.5

Microsoft .net Framework 4.5

PDF Reader (Adobe Reader 8 or higher)

Office 2007 or later (for ODBC and BIM Reporting)

### Note:

The payroll application has been tested on both the 32 bit and 64 bit versions of all the supported operating systems, however ODBC and Business Intelligence Manager reporting has NOT been fully tested on 64 bit platforms.

### **Assumptions**

The system requirements described in this document are based on configurations that have been successfully tested by the Sage HR & Payroll Quality Control team during their ongoing testing of the Sage HR & Payroll Payroll applications.

It is the responsibility of the clients IT department to combine these system requirements with those of other applications that users may have installed on their workstations to ensure sufficient resources are available.

### Note:

The payroll applications have been tested on both the 32 bit and 64 bit versions of all the supported operating systems, however ODBC and Business Intelligence Manager reporting has NOT been fully tested on 64 bit platforms.

‡ Wireless networks are not supported as actual data throughput is generally less than the required 100 Mbps, which can lead to data corruption.

### Note:

Microsoft support for Windows XP has been officially discontinued. Sage products are no longer supported on Windows XP. It is strongly advised that all workstations be updated to a minimum of Windows 7 with IE9.

## System Requirements - Server

The table below details the minimum system requirements for Payroll File Server

Payroll File Server		
	Minimum	Recommended
Processor	Dual Core 3.0 GHz or higher	Quad Core 3.0 GHz or higher
Memory	2-4 GB	8 GB
Available disk space	50 GB	100+ GB
Screen Resolution	1024 x 768	1024 x 768
Network Card ‡	100 Mbps	1 Gbps
Supported Operating Systems	Windows Server 2008 R2 x64	Windows Server 2008 R2 x64 Windows Server 2012 x64

Other Requirements:

CD / DVD ROM / USB 2.0 Port

Microsoft .net Framework 2.0 with SP2

Microsoft .net Framework 3.5 Microsoft .net Framework 4.5

### **Assumptions**

The system requirements described in this document are based on configurations that have been successfully tested by the Sage HR & Payroll Quality Control team during their ongoing testing of the Sage HR & Payroll Payroll applications.

It is the responsibility of the clients IT department to combine these system requirements with those of other applications that may have installed on the servers to ensure sufficient resources are available.

### Note:

The payroll applications have been tested on both the 32 bit and 64 bit versions of all the supported operating systems, however ODBC and Business Intelligence Manager reporting has NOT been fully tested on 64 bit platforms.

‡ Wireless networks are not supported as actual data throughput is generally less than the required 100 Mbps, which can lead to data corruption.

### **Backups**

It is the responsibility of the client's IT department to ensure that regular (daily) backups are made of the relevant Payroll folders and that these backups are secured as per client's backup policy e.g. offsite.

Month end backups should also be made after all payroll processing has been completed and salaries transmitted. These backups should be retained for a longer period in accordance with company and statutory requirements. The entire payroll folder as well as sub-folders should be included in the backup to ensure all data and program files are available should system recovery be necessary.

Full backups are recommended as recovery from incremental backups is time consuming and not always successful.

The size of backups will vary, dependant on the number of employees on the payroll and the payroll and HR modules that are in use. Backups typically range between 300 MB and 1 GB.