SMARTASSESSOR
NEXT GENERATION E-PORTFOLIO SOFTWARE

Data Security at Smart Assessor

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Data Security

This document outlines the steps taken to protect customer data hosted in the Smart Assessor application.

Hardware

Hosting Partner
Smart Assessor has chosen to partner with Rackspace Limited. Rackspace is a certified data centre and hosting company based in the UK - http://www.rackspace.co.uk/

Location
Smart Assessors servers are located in Slough in the Rackspaces data centre.

Facility

- Data Centre floor space is approximately 5,000 square meters of raised floor
- Site is manned 24x7x365 with Rackspace Operations personnel
- OEM service/maintenance contracts on all facility infrastructure systems
- SSAE16 compliant

Security

- Physical access to devices within Rackspace data centres is restricted to authorized Rackspace personnel
- Card reader and biometric access required to enter facility
- Card reader access required to enter data centre floor
- Security cameras recorded by digital video recorder
- Bomb proof film installed behind all windowed areas
- Fully fenced perimeter

Power

- 100% renewable energy
- Generator backups in case of power loss
- Generators activate and fully synchronize within 60 seconds
- Each generator has its own supply system with a total of 60,000 litres on site
- Fuel suppliers under contract to deliver fuel within 4 hours

Fire protection

- Early Smoke Detection (VESDA)
- Dry pipe pre-action fire suppression system

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Software

Server
The Smart Assessor Server runs Microsoft Windows Server 2012.

The design of the system is based on industry standards platforms both for data management using Microsoft's SQL Server 2012 and web services delivery using Microsoft Internet Information Servers.

To ensure additional security as well as data segregation every new client site is created as both an individual SQL instance as well as a separate IIS site instance.

All Smart Assessor Severs are Protected by Kaspersky Anti Virus, Daily scans are performed.

Data Backups

Weekly Full Backup + Daily Differential Backups

Smart Assessor employ's Weekly Full Backups + Daily Differential Backups this Strategy provides a Daily Backup of all modified files and directories, since the last full backup.

With this strategy, a Full Backup of all files/directories you specify is performed one day a week. Every day for six days thereafter, a Differential Backup is performed on the same set of files/directories. Each daily Differential Backup backs up the files and directories that have been modified since your last Full Backup. This means that a file modified the day after your Full Backup will be supported by a Differential Backup every single day until your next Full Backup.

When a full data restore is required with a differential strategy, only two Backup Sets are needed to restore your data – the latest Full Backup Set plus the latest Differential Backup Set. This makes a full data restore speedy because the required data only has to be restored from two Backup Sets.

The databases are regularly and automatically backed and in the unlikely event that our servers suffer a hardware failure it would be repaired or replaced within 2 hours.

Bandwidth All access to the servers is through a dynamic multiport firewall, this allows the system to regulate the required bandwidth needed to support the volume of transactions currently needed.

Risk Mitigation All servers are held in a secure offsite location specifically designed to cope with high transaction environments as well as provide a secure environment for all data.

These servers are maintained to the latest system patch and virus scanning definition to avoid back-door attacks or damage from viruses. In the unlikely event that our servers suffer a hardware failure it would be repaired or replaced within 2 hours. If failures required software reload or database recovery we have a quick and efficient process to ensure this happens seamlessly and as quickly as possible. As part of that, the server and web site are monitored every hour automatically even when not in use to detect issues and start the rectification process sometimes even before the system users are aware of an issue.

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Personnel

All Smart Assessor Staff members and Rackspace Employee's undergo a full background screening check, including:

- Right to work in the UK (in accordance with the Home Office guidelines)
- Electoral Roll
- Identity Check (Passport or other Government issued documents)
- Employee history and references
- Educational / Qualifications
- UK Criminal Records Bureau check

In the future Rackspace staff will also undergo:

- Identity Check (Media search)
- Money Laundering check
- Financial sanctions check
- OFAC register check
- International criminal records check

You can contact Rackspace or Smart Assessor for more information on background screening.

Web Application Security

Encryption of Web Application Traffic

The whole application's web site has been secured using a secure socket layer (SSL) certificate and the use of HTTPS protocol to help ensure against web site spoofing or interception of message packets in transit on the internet. Similar protection is provided in the Smart conferencing software used to provide business grade security during conferencing.

User Authentication

Users login into their own database in Smart Assessor using a secure username and password. There are several different types of account in Smart Assessor allowing you different levels are user access, for example Assessors can only login and see their own learner's data, where as a Master Admin can login and view all learner data. Administrators are the only users who can view passwords; no other type of account has access to visible user passwords. Smart Assessor also records who has logged in and when and if there are any changes to user data, it will record who made the change and when as well as what the data has changed from and to.

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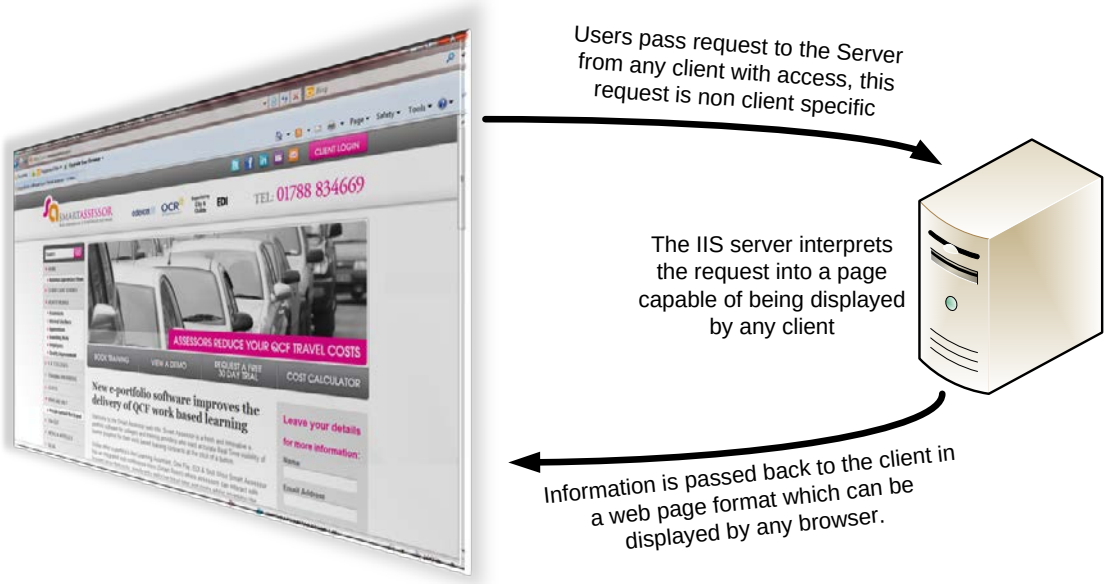
Application Architecture

The application has been specifically designed to ensure ease of deployment for clients, using industry standard HTML, Java and .NET delivering the client through a selection of standard browsers such as Microsoft Explorer, Firefox, Safari etc.

This type of web applications is an ideal solution due to the ubiquity of web browsers, and the convenience of using a web browser as a client. The ability to update and maintain web applications without distributing and installing software on potentially thousands of client computers is a key reason for it selection, as is the inherent support for cross-platform compatibility.

Also the structure of the design and the segregation of individual clients enable easy and secure bespoke applications to be developed specifically for clients, the bespoke element either only being available to be accessed by specific clients or have these development deployed over all instances.



This principal of being able to create very complex applications without the client users being aware is at the hart of the principals of the application, regardless of how the users access the system either through standard browsers or using mobile applications users are presented with a common interface.

System Scalability

The design of the system is based on industry standard platforms both for data management using Microsoft's SQL Server and web services delivery using Microsoft Internet Information Servers.

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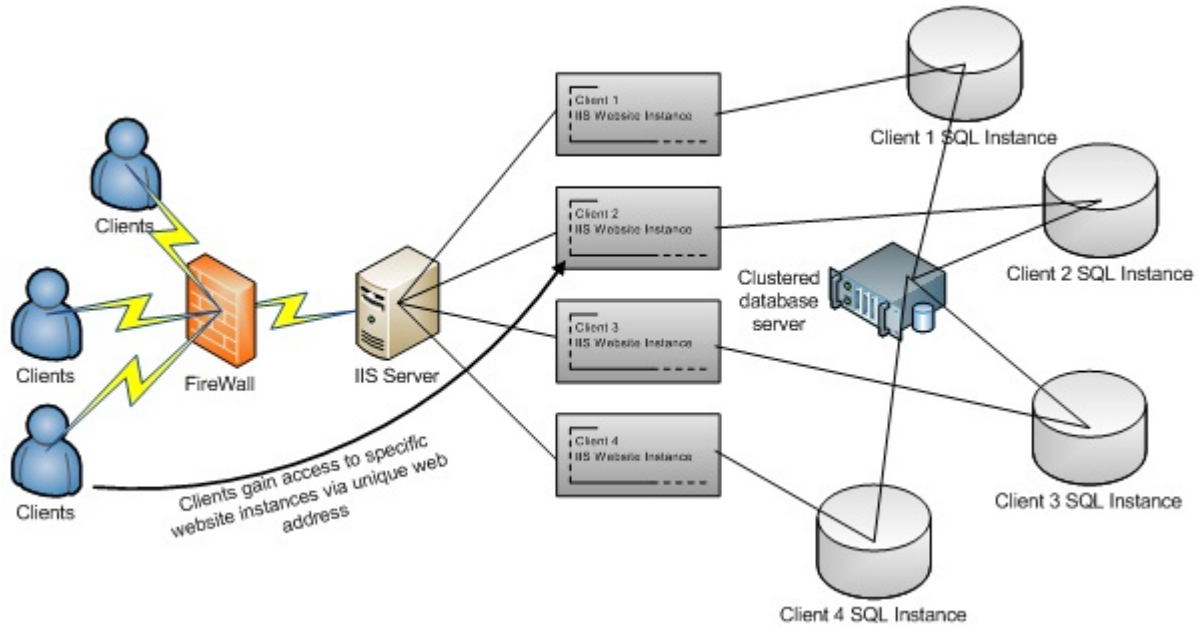
Client data is also protected in a number of ways which range from the quality of storage technology, measures to avoid interception through the process to recover from failures.

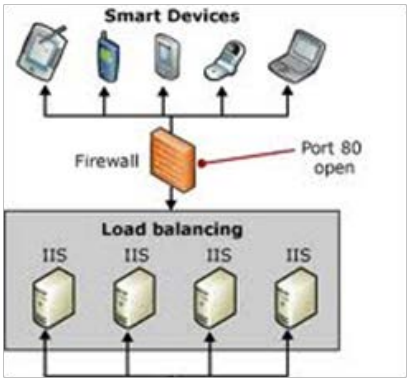


Data Management

SQL server is configured currently as a single instance server within a cluster, this cluster can be easily expanded to accommodate both volume transactions as well as volume data requirements.

Since each database is specifically allocated to a client instance, modifications and bespoke elements can easily be implemented without impacted any other client site.

Web Delivery



The architecture for the IIS servers deployment has been specifically designed to support Load balancing technologies to ensure any requirement for increased demand can be supported.

Since each IIS server can service any of the websites hosted in the cluster this process also enables an element of resilience in the system.

Access to your data is controlled by user account and password which provides access only to the data the user is authorised to see

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Office Process Security

Network Security

The Smart Assessor offices are protected by Zone Alarm Professional Firewall, which includes a central virus and malware scanner and an intrusion prevention module that monitors network traffic for malware communication, as well as Avast Antivirus which performs daily scans of the systems.

In addition, all Smart Assessor employees have a security suite (antivirus and firewall) installed on their computers.

Staff Training

All staff are trained in the importance of data security and the Data Protection Act.

Local Encryption of Sensitive Data

Access by Smart Assessor staff to customer data is normally restricted to web application access during the resolution of support calls. When Smart Assessor work on a consultation basis with customers and there is a requirement to work with a local copy of customer data, then Microsoft's EFS (file and folder encryption) and strong Windows passwords are used to protect the data.

Portable File Storage

Smart Assessor staff are advised not to store sensitive data on portable devices such as USB flash drives. However, the local security policies of customers occasionally require that data be encrypted and physically escorted direct to the intended receiver.

On the rare occasions that data is transported off client site on Mobile technology, all storage media is encrypted to FIPs140-2 standard which provides a 256bit encryption algorithm.

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