

KPMD EQA Programme Manager Software

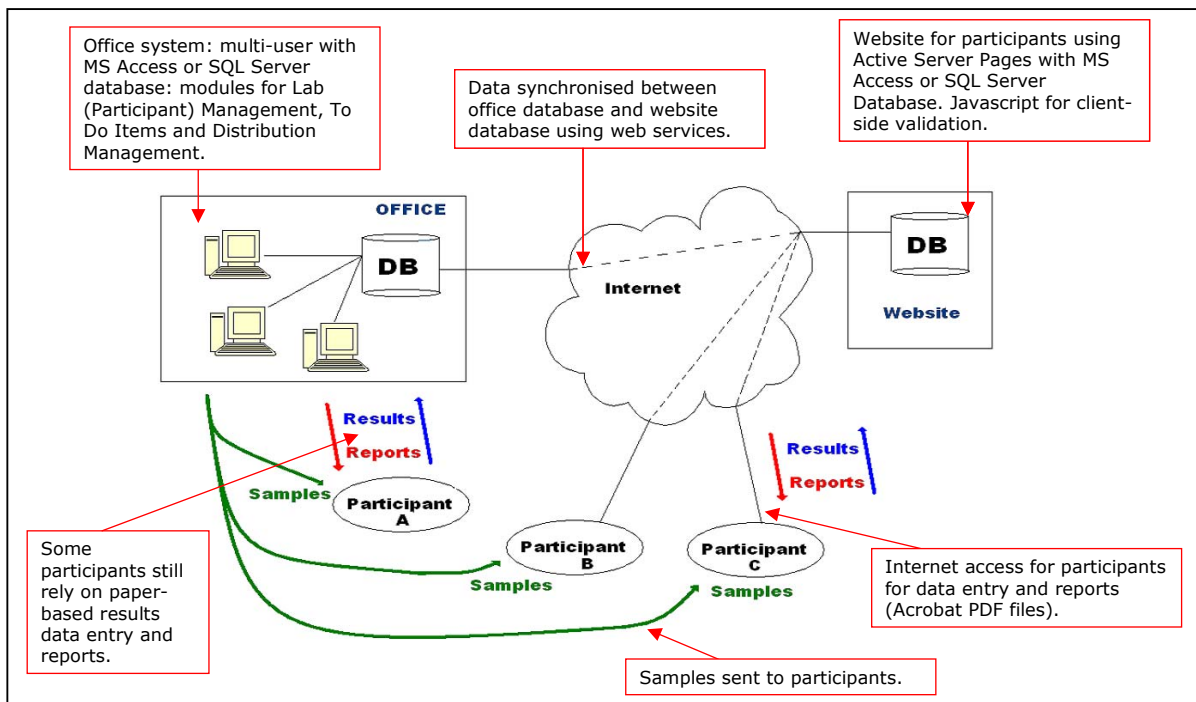
Infrastructure Requirements

Overview

The EQA Programme Manager system consists of three elements:

- a Microsoft Visual Basic .Net Windows forms client (written in VB .Net version 3.5) that is installed on each PC, which provides the office-based system;
- a classic Microsoft Active Server Pages (ASP) web application that runs on a web server that allows participants to input result details via the web; this can be hosted by KPMD or by the client (all existing clients currently use KPMD); and
- Microsoft Web Services that are used to post or pickup data between the other two elements. The web services are standard web services written using Microsoft VB .Net 3.5.

The following diagram illustrates how the system works.



Both the website and office databases are normally stored in a Microsoft Access or SQL Server database management system (we would strongly recommend SQL server and will assume this in this document). A local area network and file server are therefore required on the client's premises to enable multi-user access by the staff.

As well as hosting SQL Server, the office file server will also be used for storing correspondence (Microsoft Word documents) sent to participants, Word templates used by mail merge to generate the correspondence, and participants' Round reports.

The client's local area network will need to be connected to the internet using a broadband or leased line connection. This is necessary for web services to synchronise the two databases and for the client to use File Transfer Protocol (FTP) to copy reports from the office file server to the web server.

Internet access from the office is also required for the automatic generation of emails at various points in the process, for example to notify participants that a Round has been opened and that samples have been sent. The office software uses web services to generate and send emails from the web server. This eliminates potential problems interfacing the software with email software, Microsoft Exchange/Outlook, Pegasus, Eudora or whatever.

Finally internet access is required for remote support (see below).

Web Services

The Web Services element of the system is built into the office-based system and the participants' data-entry website application. An example of this is for when a new Round is created and the data is passed from the office-based system up to the website. The Web Services handle the transaction at both ends.

The application has been installed in a number of organisations with secure firewalls and proxy servers, and web services have not caused any problems. The web services use SOAP, which in turn uses HTTP. If there is a proxy server within an organisation then the following lines of code are added to office software for use when calling one of the web services:

```
Dim pr As New System.Net.WebProxy("127.0.1.2", 80)
pr.Credentials = System.Net.CredentialCache.DefaultCredentials
wsFoodLaw.Proxy = pr
```

DefaultCredentials represents the system credentials for the current security context in which the application is running. For a client-side application, these are usually the Windows credentials (user name, password, and domain) of the user running the application. This means there will be no impact as long as the user running the system has access to the internet via the proxy server. The only possible problem that we may encounter is that the DefaultCredentials property applies only to NTLM, negotiate, and Kerberos-based authentication. If you are using a different type of authentication, then you will have to let us know and we will have to look at a different solution.

Hardware and Third-Party Software

If a new office file server is required then we would advise the following hardware as a minimum:

- a single-processor server running the Microsoft Windows Server 2003;
- 4 GB Memory;
- 400GB Hard Disk;
- gigabit Ethernet network card.

A typical example is a Dell Poweredge PE1900 Quad Core Intel® Xeon® E5335, 2x4MB Cache, 2.0GHz, 1333MHZ, with 4GB Memory, 667MHZ and two 300GB Hard Drive in a SCSI Controller Card. A recent cost for this configuration was around £2,000 ex VAT/IVA (GB Pounds).

Rather than a traditional tape-backup device we would suggest an external USB hard drive that can be connected to the network for regular backups and used to transfer a copy of data to an off-site data store.

The third-party software requirement for this system is Microsoft SQL Server Standard Edition 2005 for a single Processor, which might cost around £5,000 ex VAT/IVA (GB Pounds).

We support all of our clients, in the UK and world-wide, using remote access software, such as WEBEX (see [WEBEX website](#)) or pcAnywhere (see [Symantec website](#)) or Remote Administrator (see [Famatech website](#)). This should be installed on at least one client PC for support over the internet. Our preferred option would be WEBEX.

Technical Support

KPMD can offer an element of hardware and infrastructure support but some on-site help will probably be required. Most hardware suppliers will offer support and will configure new file servers, including backup routines, as required by the customer.

The following areas of support, excluding that specifically required for the KPMD software, will be required:

- Hardware – PCs, printers, network cabling and hubs etc;
- Operating System and Network software – user accounts, network resources, installation of software, Microsoft patches/fixes/updates etc;
- Back & Restore routines – operating system level, programs and applications, working documents (Word documents, Excel spreadsheets etc);
- SQL Server – database backup and restore, log file clearance, new installations, ad hoc data reports etc.

Data Cutover of Existing Data

The client needs to provide a set of participant data at the start of the project so that we can start development and testing with realistic data. They should then provide a full set of data one more time when the system goes live so that it starts with the most up-to-date data.

The data can be provided in whatever format is most suitable: ASCII text files (comma-separated-value or fixed length fields or XML), or in an Excel spreadsheet, or a Microsoft Access database. Ideally the format should be consistent each time the data is provided.

Once the system has gone live, and data is being added and updated on a frequent basis, then we do not envisage any more need to import data from the client.

Installation

The process for the very first installation of the system will probably be as follows:

1. create a SQL Server database named EQAsystem or similar
2. create an SQL Server user account EQAuser and let us know what the password is. We will use this information to hard-code access to the SQL Server database without resorting to file or system Data Sources on the client PCs. The user should be set as default to the new database and be able to connect only
3. we will send you a SQL Script(s) to create the tables, views and stored procedures (along with the necessary GRANTS for the EQAuser), and other SQL Script(s) to create the base data
4. we will also send you a setup routine (SETUP.exe) for use in installing our EQA system plus Microsoft .Net Framework. Copy this installation setup to a common network drive that can be accessed by all the PCs to be used
5. run the setup routine on each PC to be used
6. create new file folders, also on a common network drive that can be accessed by all of PCs to be used. One folder can be called Documents, another Templates. Our system creates Word documents (in Documents) using mail-merge templates (from Templates), so the users will need full control of these folders

An administrator of the SQL Server database (probably in the IT department), will need to set up a regular background process (SQL Server Agent) at an agreed frequency for backing up the database. It is strongly recommended that a full backup and restore is tested at some point.

After the first installation, we will send amended versions of the system in order to fix bugs and add new features. These new versions will be installed from new setup routines that will need to be run on each PC. There will also be changes to the SQL Server database, these will be implemented using SQL scripts that will be run by an administrator of the SQL Server database (probably in the IT department).