



Stage: Deliver

Development & Alumni - ThankQ Analysis

USG Portfolio Projects

USG001

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1 Document Management

1.1 Contributors

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1.2 Version Control

Date	Version	Author	Section	Amendment
27/07/15	1.0	DW	All	
30/07/15	1.1	DW	6	Stakeholder feedback added to document

2 INTRODUCTION

This document has been prepared to provide an initial understanding of what would be needed, in terms of infrastructure and effort, from IS Applications in order to establish the infrastructure required to host the new web-based version of the ThankQ software (provided by the Access Group Ltd) used by Development & Alumni (D & A) at the University of Edinburgh. It is planned, at the moment, that this move to the new version will commence in 2016-17 but this report has been undertaken to provide D & A with advance detail on what needs to be included with regards to planning and costing for their eventual project.

3 CURRENT ENVIRONMENT

The current set-up of ThankQ was established in 2010 under project DAS006. This project provided dedicated infrastructure for ThankQ and allowed the latest version of the software to be applied by the vendor. This project also saw the installation of ThankQ Intranet and included the migration of the D & A MyEd channels onto the new application tier. Another benefit of the dedicated infrastructure has been the provision of improved remote access for staff from ThankQ.

The infrastructure contains a TEST environment and a LIVE/TRAIN environment. Both of these contain Application and Database tiers that are based on virtual servers running Windows Server 2008 x64 Standard Edition R2. The application servers also run IIS 7.5 and .NET framework 2.0; the database servers use MS SQL Server 2008 Standard Edition SP1.

Full details on the current infrastructure, including the latest version of the Technical Architecture Document, are available at

<https://www.wiki.ed.ac.uk/display/insite/ThankQ>

This documentation provides full details on interfaces, users, cron jobs, scheduled tasks, etc.

4 NEW ENVIRONMENT

The Access Group Ltd have provided documentation (dated November 2014) on the hardware and software requirements for the new version of ThankQ. The recommended requirements are:

- Database Server – x86 Processor; 2.0 GHz or faster; RAM of 4GB or more; 5GB of free disk space; Windows Server 2012 R2 (64 bit) – with latest service packs
- Database – SQL Server 2012 Standard Edition; Integration Services must be installed
- Web Server – x86 Processor; 2.0 GHz or faster; RAM of 4GB or more; 2GB of free disk space; Windows Server 2012 R2 (64 bit) – with latest service packs; .NET4.0/4.5
- Supported platforms and browsers – Chrome; Firefox; Internet Explorer; Safari; Android Browser
- Supported versions of MS Office – 2007; 2010; 2013
- Web Portal/API/Calling Application Server – same as for Web Server above
- Mobile Application Server – same as for Web Server above

Other points concerning backup of data and remote access are also covered in the above-mentioned document.

All of these have been analysed by colleagues in IS Applications and their feedback does not identify any major problems or stumbling blocks to setting up new infrastructure to host and maintain the new version of ThankQ. Their comments make the following points:

- The existing setup does not quite meet the minimum requirement for the new environment, we should therefore replace the existing servers.
- Only the latest versions of browsers are supported, we should therefore check what we use. [The University policy on supported browsers is available [here](#)].
- External access for the vendors will need to be updated.
- ThankQ to IDM is done via stored procedures; these would also need to be moved.

The question of whether a development environment should be created has also been raised, but this is not thought to be necessary.

5 ESTIMATION OF EFFORT & COSTS

The preferred approach would therefore be the acquisition of new servers to meet the requirements of hosting the new version of ThankQ, and building these, as appropriate, with the recommended software and network components. This newly built service could then be made available to D & A and the Access Group Ltd to install and configure the new ThankQ application.

This would necessitate the following work from IS Applications:

Project Management/QA

Systems Design

- Prepare Technical Architecture Diagram
- Review/Sign off TAD
- Order servers through ITI

Build (Infrastructure)

- Build of web & database servers/Remote access
- DR testing
- System documentation
- Review of SLA/OLA
- Handover with Production (inc. Deployment Checklist)
- Sign-off build stage

Testing

- Support vendor testing
- Sign-off testing

Deployment

- Support deployment to Live

This work is estimated at a 'most likely' total of 23 days' effort, and a 'worst case' of 27 days. The breakdown for this is appended on the following page.

The amount of effort required should also include 2-3 days to cover the possibility of work needing to be done on data feeds to/from ThankQ, although it is recognised that this may be covered by the Access Group.

Finally, the cost of replacement servers would need to be met. This would require the acquisition of at least two servers for each environment (i.e. 4 in total) and the same again for disaster recovery purposes, regardless of the DR solution that is followed.

As an indicative figure, the servers would cost approximately £5,000 per server to buy and support for five years, producing a total cost of c. £40,000 overall.

6 COMMENTS FROM STAKEHOLDERS

The following comments were received in feedback from participants in the project. These should be borne in mind for any future project to implement and establish the new version of ThankQ as they are important business requirements that the technical side of any such project will have to take into consideration:

Development and Alumni -

Being a web based version of the application, the intention would be to stop using the Intranet versions of thankQ and allow users in Schools and other departments, including possibly overseas offices, to use this new version of the software. If IS recommend the software should be EASE authenticated this should be stated.

Also, we currently use the University's QAS postcode lookup. Because our current version of thankQ is client server, I'm not sure if we can keep using this if we upgrade to a web version? Again, something for IS to confirm, otherwise we may have to factor in additional costs for using another postcode lookup provider, such as PostCodeAnywhere, who we currently use for the telethon calling application and thankQ intranet application.

I think the main point to note is that, because this is an upgrade of our current software, Access Group have agreed that all of our current features, functionality and integrations at the point we upgrade, will be brought over by them as part of the project, with support from IS where appropriate, including the IDM connector, thankQ MyEd alumni portal channels, online donations page, etc. As IS have recommended that we replace the existing servers, I'm assuming this will have implications for firewall and IP changes with for taking online donations and paperless direct debits.

Applications Management -

Multiple web servers: DAS have outlined the need for a resilient service especially through periods like the Telethons.

Use of the system by external users without EASE accounts: DAS mentioned that there could be a requirement for users without EASE access to use the system, for example members of staff in their New York office.

APPENDIX 1 – Estimation Spreadsheet

Methodology Stage or Activity	Task	Team(s), Role(s) or Individual(s) Responsible for Execution of Task	Best Case Estimate a	Most Likely Estimate m	Worst Case Estimate b	E Value	SD Value	Task Estimate 95% Confidence
Project Management	Project Management	Project Services	5.0	5.0	6.0	5.2	0.2	5.6
	Quality Assurance	IS Applications	2.0	2.0		1.7	-0.4	0.9
Systems Design	Prepare TAD	Development Technology	1.0	2.0	2.0	1.9	0.2	2.3
	Review/Sign off TAD	Dev Tech/Production Management	0.5	0.5	1.0	0.6	0.1	0.8
	Order servers through ITI	Development Technology	0.5	1.0	1.0	1.0	0.1	1.2
	Sign-off design documentation	Dev Tech/Production Management	0.5	1.0	1.0	1.0	0.1	1.2
Build	Build of web & database servers	Development Technology	3.0	4.0	5.0	4.0	0.4	4.8
	DR testing	Development Technology	1.0	1.0	2.0	1.2	0.2	1.6
	System Documentation - TAD & Ops Doc	Development Technology	1.0	1.0	2.0	1.2	0.2	1.6
	Review of SLA/OLA	Development Technology	1.0	1.0	2.0	1.2	0.2	1.6
	Handover to Production	Dev Tech/Production Management	0.5	1.0	1.0	1.0	0.1	1.2
	Sign-off build stage	Dev Tech/Production Management	0.5	1.0	1.0	1.0	0.1	1.2
Acceptance	Support vendor testing	Dev Tech/Production Management	1.0	2.0	2.0			
Deployment	Support deployment to Live	Dev Tech/Production Management	1.0	1.0	2.0	1.2	0.2	1.6
Closure	Closure		0.5	0.5	1.0	0.6	0.1	0.8
						0.0	0.0	0.0
	Totals					23		27
	E (Project Work)		23					
	SD (Project Work)		2					
Project Estimate > 95% Confidence								
			27					