



Project Document Cover Sheet

Project Information			
Project Acronym	L4L		
Project Title	Logins for Life		
Start Date	1 January 2010	End Date	31 March 2011
Lead Institution	University of Kent		
Project Director	John Sotillo		
Project Manager & contact details	Matthew Slowe, Computing Officer IS Technical Services Cornwallis South S19 University of Kent Canterbury CT2 7NF Tel: 01227-824265 Email: M.Slowe@kent.ac.uk		
Partner Institutions	none		
Project Web URL	Website: http://www.kent.ac.uk/is/projects/loginsforlife/ Blog: http://blogs.kent.ac.uk/logins4life/		
Programme Name (and number)	Access and Identity Management		
Programme Manager	Chris Brown		
Document Name			
Document Title	<i>Project Plan</i>		
Reporting Period			
Author(s) & project role	Bonnie Ferguson David Chadwick		
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Access	X Project and JISC internal		X General dissemination

Document History		
Version	Date	Comments
1	5 Feb 2010	Submitted to JISC.



JISC Project Plan

Overview of Project

1. Background

The Logins for Life (L4L) project aims to address a number of issues in recent years that challenge our ideas about how to handle user accounts and identities. Most people these days have a digital identity when they come into contact with the University, which we would like to use to give them more convenient access to University resources. People may also change their relationship to the University throughout their lives and we would like a method for changing their level of access on their accounts, instead of issuing a different account for each role. Finally, we would like a way of keeping in contact with our users when they leave the University.

L4L is a collaboration between the School of Computing (CS) and the Information Services Directorate (IS) at the University. This allows us to bring the expertise of the Information Systems Security Research Group (ISSRG) to help provide practical solutions to these challenges in a wider University context.

The project builds on a significant amount of previous RTD work at the University of Kent, some of it funded by JISC, other of it funded by the EPSRC and various EC programmes. In particular it is worth mentioning:

- the OpenID study, funded by JISC, and led by EDINA, which studied the use of OpenID in the academic community, and built the OpenID-SAML gateway that will be used by the current project
- the Shintau project, funded by JISC, which studied attribute aggregation and built the Account Linking Service which will be used by the current project
- the PERMIS project, funded by the EC ISIS programme, which built the first role based access control (RBAC) policy decision point (PDP) that will be used by the current project
- the FAME-PERMIS project, funded by JISC and led by the University of Manchester, which studied the use of Level of Assurance (LoA) in federated identity management and added support for the LoA to PERMIS
- the Easy Expression of Authorisation Policies, funded by the EPSRC, which studied the use of natural language for the specification of access control policies, and added support for a controlled natural language (CNL) interface to the PERMIS authorisation system,
- the TAS3 project, funded by the EC FP7 programme, which is studying the use of trusted services to manage personal data in a privacy protecting way, is continuing to develop the CNL interface to PERMIS and attribute aggregation tools, and which will inform the direction of the current project.

Consequently there is a significant amount of expertise as well as open source software that is available to the current project and that can be utilised by it to introduce a login for life service to the end user community

2. Aims and Objectives

Aims:

The aim of this project is to clarify our Logins for Life strategy and have it reviewed by an expert in the field to ensure we are adequately covering all known use cases. We will also explore the open source packages available to meet these needs and build any 'glue' software needed to create a working architecture to meet these requirements. Finally, we will produce a set of recommendations, best practices and a plan for live adoption at Kent. These findings will be shared with the JISC community.

Objectives:

1. To survey our key user groups at Kent such as prospective and current students, staff, alumni as well as representatives from Human resources and IS department to build a list of needs and objectives from a number of points of view.
2. Engage with the HE community to discover best practices for identity management .
3. To produce a set of use cases that reflect the findings of 1 and 2.
4. Analyse and make recommendations to IS and the School of Computing and incorporate any feedback
5. Produce a working architecture to demonstrate how these recommendations could be fulfilled in a test environment.
6. Test this environment with different user groups.
7. Have a third party (LSE) evaluate the recommendations and architecture.
8. Hold a workshop to show findings and demonstrate the proposed architecture.
9. Produce a roadmap for adoption, extracted from the overall vision of Logins for Life.

3. Overall Approach

Strategy and/or methodology and how the work will be structured

This project will have five major strands, each with an associated work package:

- **WP1. Project management.** Managing the project through its entire lifetime to ensure successful delivery of results to time and budget.
- **WP2. Requirements gathering.** Liaising with university departments, staff, students and alumni to capture their requirements
- **WP3. Investigating technologies.** Investigating what other market players are doing and the current state of open source products and defining any glue components that are currently missing.
- **WP4. Building and testing a demonstration system.** Use existing open source products along with any glue components that are missing to build a demo system. Trial with users and technical staff and modify as necessary.
- **WP5. Dissemination.** Publicising the project to the JISC community, building a project web site, and making recommendations to Kent and the wider community through a documented set of procedures

Project Acronym: Logins for Life (L4L)

Version:1

Contact: John Sotillo

Date:29 Jan 2010

Important issues to be addressed

- How can we incorporate existing digital identities (e.g. Google, Facebook, OpenID) with our University accounts?
- Can we offer users the option to login with multiple identities in a way that will not overwhelm and confuse?
- Can OpenSSO, Shibboleth, Permis, OpenID Gateway and the Account Linking Service be 'glued' together to provide a service that we require?

Scope and boundaries of the work, including any issues that will not be covered.

This work will include a large survey of users both in and out of the University to create a set of use cases. It will also review best practise both in HE and in the commercial sector (e.g. Amazon, iGoogle, etc.) to produce recommendations for how we would like systems to behave under the different use cases.

The demonstration system will include a number of open source systems and will meet as many needs as possible. It may also include wireframes or mock-ups of how we would like a system to work if that would better convey our ideas to our audience.

We are not aiming to produce a production system during the Logins for Life project since the timeframe would make this too risky. We will produce however, a roadmap for adoption at Kent.

Critical success factors.

It will be very important that stakeholders contribute to the requirements and participate in the testing. Engagement with the community will also be very important.

The success of this project will inform the long term identity strategy at the University.

4. Project Outputs

The deliverable for the Logins for Life project are:

- **D1.1 Project Plan, D1.2 Progress Report, D1.3 Final Report and D1.4 Completion Report.**
- **D2.1 Requirements and Use cases for the University of Kent**
- **D2.2 Survey of best practises for lifetime identity provision amongst Universities and leading online companies such as Amazon and Google.**
- **D3.1 Design of overall architecture and any missing glue components**
- **D4.1 Demonstration system for trialling with users.**
- **D4.2 Demonstration results. Results obtained from performance and stress testing and usability results from trialling with users.**
- **D5.1 Project Web Site**
- **D5.2 Recommendations to JISC and Kent for Logins for Life policies and procedures**
- **D5.3 Recommendations to JISC and Kent for software architectures**
- **D5.4 Roadmap for deployment at Kent**

We will also gain:

- Better understanding of the principals of identity management
- Understanding of the identity management tools and systems available
- Knowledge transfer between the School of Computer Science and the IS Department
- Development of stronger ties between academic departments and the IS Department

5. Project Outcomes

We envisage that the project outcomes will contribute to a user centric fine grained approach to access to university and other resources. This approach places users at the centre of their electronic web of resources, and allows them to control access to these resources using a variety of digital identities and login accounts that are available to them throughout their lifetime. We expect this will make it easier for users to gain access to teaching materials, their degree certificates and transcripts, research resources etc. both whilst they are at and after they have left the University.

We also expect that this will increase the overall security of the system, since if users are able to use one or very few login accounts to access multiple resources, they are more likely to protect this (these) account(s) with a strong password and are less likely to share it (them) with others. It should also reduce the administrative support effort that is needed, as users will be less likely to forget frequently used passwords and they wont need to have multiple accounts that are only used very infrequently.

On a social level we hope that this will increase the interaction between alumni, past staff and the University, since their login accounts will remain active after they have left, thereby providing them with privileged access to resources that are not available to the general public e.g. library resources, email service etc. This will facilitate lifelong communication with alumni and maintain a bond that may lead to mutually beneficial activities such as recruitment, student work placements, income opportunities (either through postgraduate education or through fund raising), and mentoring.

6. Stakeholder Analysis

Stakeholder	Interest / stake	Importance
JISC community	All Universities face similar issues of provisioning users throughout their lifetime and will be looking for recommendations and best practises in this area.	High
All users	May have existing digital identities (e.g. OpenID account) which they would like to use throughout their interaction with The University of Kent.	High
Prospective students	Need to login to get information or apply for a course.	High
Students	Need provisioning of services such as logging into University PCs, access to wireless network, file store, email, specialist software packages, etc.	High
Alumni Relations	Would like to provide an email for life service for all alumni - most likely in the form of someone@alumni.kent.ac.uk . This would facilitate lifelong communication with alumni and maintain a bond that may lead mutually beneficial activities such as recruitment, student work placements, income opportunities (either through postgraduate education or through fund raising), and mentoring.	High

Employees	Need services during their working life and may want to keep their Kent account after leaving	High
Past Employees	Keep an active account. May wish to re-apply for a post, keep in contact with ex-colleagues, become external examiners etc.	Medium
Human Resources	Concerned about provisioning employees and removing rights when contracts finish. Need to avoid staff masquerading as Kent staff once they leave.	High
Conference delegates	Conference delegates and other visitors also require wireless network access and other services for short periods of time.	Medium
IS department at Kent	Need to understand the policies and be able to provision users appropriately at each LOA.	High

7. Risk Analysis

Risk	Probability (1-5)	Severity (1-5)	Score (P x S)	Action to Prevent/Manage Risk
Staffing	2	5	10	We are using a team of >6 people so there is no single critical person. We have advertised for two new members of staff so they should be in post in early 2010
Organisational: (e.g. loss of institutional support for project)	1	4	4	Dissemination of clear information and agreement for support from appropriate senior executive managers
Technical problems (e.g. failure to find an appropriate architecture)	1	4	4	We are already using current state of the art designs which have been internationally reviewed, and open source software that has been successfully tested for interworking
External: e.g. govt cutbacks in funding, supplier failure etc.	2	2	4	Develop and maintain good communication with JISC, other AIM projects, stakeholders and suppliers. Share solutions to common problems
Legal: Copyright, licensing and IPR.	1	3	3	University will use standard open source software and licences where possible throughout the project. Use of standard interfaces means products can be switched

Delays/ missed deadlines	3	2	6	We intend to use an agile approach and assess the progress often, so any delays can be dealt with early. We have built-in contingencies in the project plan
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8. Standards

Name of standard or specification	Version	Notes
X.509v3 certificates (SSL and end user)	X.509 (2001)	Used for authentication
X.509 attribute certificates	X.509 (2001)	Used as specified for authorisation
SAML (attribute assertions)	SAMLv2.0	Used to pull attributes from Attribute Authorities
XACML (request context)	V2	Used to interface to PERMIS PDP
PERMIS XML policy schema (proprietary)	V5.0	Used instead of XACML policies since easier to understand and faster to reach a decision
OpenID	V2	Used to allow OpenIDs to login to university accounts

9. Technical Development

During the project all the software will be designed before any code is written. The designs will be quality assured by experienced staff and the project managers at each partner site. All designs at Kent are held in a local Subversion SVN system for ease of distribution and tracking changes. To ensure that the developers are using the most up-to-date code, and to make coherent and retractable changes to it, the CVS versioning system will be used. All the core PERMIS software is already held in this system. The CVS content is frequently backed up onto a second hard disk, and a quarterly back-up is burnt onto a CD-RW. This protects the development process against hardware failure.

Any changes to the existing PERMIS codebase will be regression tested to ensure that no bugs are introduced. An automated regression testing facility has been developed for PERMIS containing a test suite with well over a 1000 test cases. New test cases are continually being added. All new functionality produced under this project will have regression tests developed for it. This will ensure that any future development will remain compatible with the ones developed under previous JISC projects such as DyVoSe, VPMAN and Shintau.

10. Intellectual Property Rights

All software released during this project will use the Open source BSD type licence and be released to the JISC community. We have significant experience of this mode of distribution already (PERMIS has several hundred downloads per month).

Project Resources

11. Project Partners

None (although LSE will be subcontracted to QA some of the final deliverables)

12. Project Management

The project will be led by a steering group that will meet monthly and will be chaired by the project director, John Sotillo. The project manager is Matthew Slowe. The steering group is made up of the leaders of the work packages (see below) plus Gill Woodhams, the Head of Planning and Administration and Lydia Weller, Project Planning and Support Manager, ISD.

The various WPs and their leaders are:

- **WP1. Project management.** (6 person weeks) led Peter Riley
- **WP2. Requirements gathering.** (11 person weeks) led by Bonnie Ferguson.
- **WP3. Investigating technologies.** (14 person weeks) led by Bonnie Ferguson.
- **WP4. Building and testing a demonstration system.** (32 person weeks) led by David Chadwick.
- **WP5. Dissemination.** (8 person weeks) led by John Sotillo.

Staff working on the project will be given weekly work sheets, and will produce weekly progress reports. Day to day decisions will be made by the WP leaders and the development staff concerned. Important issues and exceptions will be reported to the project manager, who may either deal with these himself or refer them to the steering group at his discretion. Strategic decisions will always be dealt with by the steering group.

The various members of the project team and their contact details are as follows:

1. John Sotillo , j.sotillo@kent.ac.uk
2. David Chadwick, d.w.chadwick@kent.ac.uk
3. Peter Riley, p.w.riley@kent.ac.uk
4. Matthew Slowe, m.slowe@kent.ac.uk
5. Lydia Weller, l.weller@kent.ac.uk
6. Gill Woodhams, g.woodhams@kent.ac.uk
7. Bonnie Ferguson , b.ferguson@kent.ac.uk
8. Stijn Lievens, S.F.Lievens@kent.ac.uk
9. George Inman, G.Inman@kent.ac.uk
10. A N Other - to be recruited.

13. Programme Support

The project would like the support of the Programme Manager in facilitating links with other projects and with external bodies where this is appropriate, for example, during the requirements gathering phase and use case development, and in the dissemination phase.

14. Budget

See **Appendix A**. There are no changes at present to the one in the proposal.

Detailed Project Planning

15. Workpackages

Appendix B contains a detailed description of the various work packages and deliverables, along with a Gantt chart.

16. Evaluation Plan

Timing and task	Factor to Evaluate	Questions to Address	Method(s)	Measure of Success
July 2010 (Task 2.6)	Use cases	Do the use cases cover all the major scenarios	Review	Use cases cover the majority of user scenarios
December 2010 (Task 4.7)	User experience	Is the user experience acceptable, given multiple login options	User testing at Kent	Successful feedback from user tests
September 2010 (Task 3.5)	New Technologies	Were any important technologies missed? Are there best practises that can be adopted?	Presentation to central teams and refine	Team members are satisfied with review and refinements offered
December 2010 (Task 4.6)	Demonstration system	Is the software feasible, scalable, fast enough, and reliable	Technical review. Load performance testing	Repeatable installation process Successful load testing
February 2011 (Task 5.3)	Community Recommendations	Are the recommendations generic enough to be of use for the HE community?	External review by expert from LSE	Recommendations are useful for the whole community

17. Quality Plan

Output Timing	Quality criteria	QA method(s)	Evidence of compliance	Quality responsibilities	Quality tools (if applicable)
D1.n JISC reports	Fitness for purpose	Internal review	Accepted by JISC	Project Manager	Word processor
D2.1 Requirements and Use Cases	Covers most user scenarios and all of the major ones	Internal review	Signed off by user services manager	User services manager	Word processor
D2.2 Survey of IDM best practices	Covers the majority of	Review by external	Good review	David Chadwick	Word processor

	IDM systems	reviewer	report		
D3.1 System Design	Fit for purpose	Internal reviews	System can be built	Project Manager	Word processor
D4.1 Demonstration System	MTBF, Ease of use	System development methodology, Coding standards and code Inspections	Successful user trials	David Chadwick and Bonnie Ferguson	CVS, Regression testing, Performance test bench
D5.1 Web site	Informative, easy to navigate	Prototyping	Number of views and blog postings	Bonnie Ferguson	Dreamweaver, WordPress MU
D5.2/3 Recommendations	Fit for purpose	External Review (LSE)	Good review report and accepted by JISC	Director of Information Services	Word processor
D5.4 Kent Roadmap	Implementable in reasonable timeframe	Internal review	Accepted by Information Services Committee	Director of Information Services	Word processor

18. Dissemination Plan

Timing	Dissemination Activity	Audience	Purpose	Key Message
Throughout the project	JISC programme management and related events	Other JISC projects in this theme	Sharing experience and networking	Explaining the Logins for Life project and finding
March 2011	Dissemination workshop at the University of Kent	HE community	To disseminate findings and recommendations for logins for life	Informing the community of the best practices and possible architectures that we recommend for logins for life.
Throughout the project	Logins for Life project websites http://www.kent.ac.uk/is/projects/loginsforlife/index.html	The University, JISC and the rest of the HE community and internal	To act as the first point of contact about the project. To give an overview of the project and publish key documents like the project plan	Giving information about the project
Throughout the project	Logins for Life project blog http://blogs.kent.ac.uk/logins4life	The University, JISC and the rest of the HE community and internal	To give project updates and invite comments on the work as it progresses	Project information and debate

May 2011	Terena Networking Conference (http://tnc2011.terena.org/)	Global HE community	International dissemination of project results	User centricity and long term relationships
Throughout the project	Publicity within the University of Kent including articles in the IS Inform newsletter, presentations at Departmental meetings, news items on Camus Online.	University of Kent	To inform the University about the project and encourage them to participate in the needs gathering stage.	To raise awareness of the project and prompt user engagement.

19. Exit and Sustainability Plans

Project Outputs	Action for Take-up & Embedding	Action for Exit
Project documents for JISC (Project plan, progress and final reports)	These will be linked from the project website indefinitely	All reports will be submitted to JISC by the deadlines and put on the project website.
Set of recommendations, policies and a roadmap for adoption for Logins for Life	Ensure that the recommendations are considered in the annual operational plan for IS	Projects for implementation are created
Software releases	All open source software released by this project will be available to the community for at least 5 years after the completion of this project, from the existing PERMIS web site.	
Internal reviews - <ul style="list-style-type: none"> Lessons learnt Ideas to take forward 	Reviews for internal purposes which will be used to improve future projects	Publish as part of the JISC reports and pass to our IS project team

Project Outputs	Why Sustainable	Scenarios for Taking Forward	Issues to Address
Software releases	Standards based, open source, application independent addition to authz infrastructures, modular, extensible	1. Encourage open source community to build around it 2. Further RTD grants to continue its development	1. How to fund coordinator of this project 2. Finding appropriate calls for proposals
Logins for Life project blog http://blogs.kent.ac.uk/logins4life	Will contain project information and allow comments and further discussion during and after the project.	Continuing to host and respond to comments on the blog	Who will be responsible for answering comments and questions when the project finishes

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Appendixes

Appendix A. Project Budget

Appendix B. Workpackages