



Further Education Institutional Access Management Support (FEIAMS) Project – Final Report (Draft)

Project Name

FEIAMS

Report Authors

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Contact Details

Acknowledgements

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Executive Summary

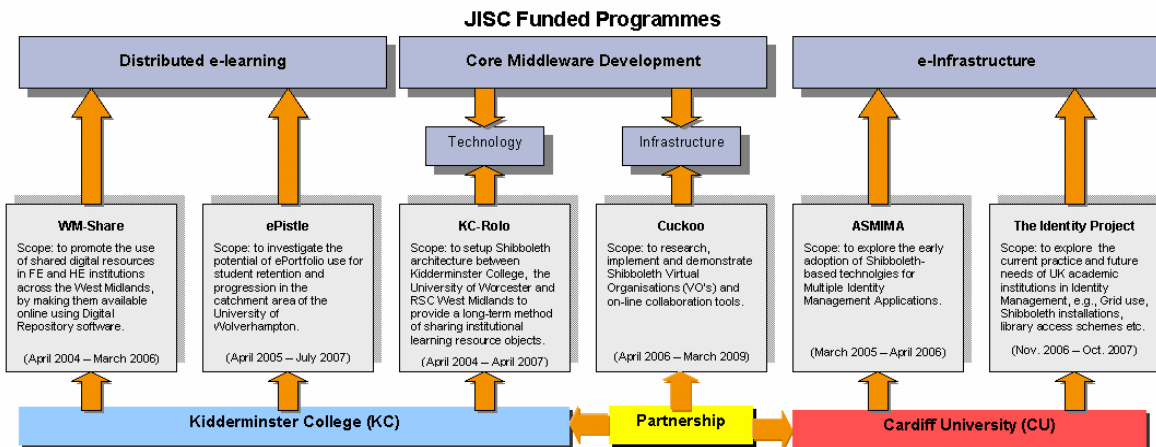
The FEIAMS project transpired as a collaboration between Cardiff University (CU) as the lead institute and Kidderminster College (KC) in answer to an invitation to tender for funding via the JISC Federated Access Management: “Institutional Access Management Support Project” (JIAMSP) initiative. The rationale for the proposal was driven in part by the desire to extend the existing, successful collaborative partnership between KC and CU but also the aspiration to share their extensive, cumulative expertise and experience in the field of Federated Access Management (FAM) and Shibboleth in particular, thereby assisting the education community to better understand and reap the full benefits from this emerging technology. The primary focus of the FEIAMS project was to provide a direct support mechanism to Further Education (FE) colleges and small Higher Education (HE) institutes seeking to join the UK Access Management Federation (UKAMF) as Identity Providers (IdP) by assisting them to work through the JISC Access Management Institutional roadmap, and delivering the technical requirements associated with steps 3 and 4 (Appendix A). Thus, the main objectives of the project were to provide:

- assistance in successfully managing each step of the roadmap
- guidance and advice in completing the associated pre-requisites
- technical support in deploying the Shibboleth software
- basic training enabling in-house management of the installed software.

This report describes how these objectives were met and in part modified to deal with unexpected contingencies arising during the life of the project. It concludes with the assertion that the FEIAMS project experience has proven that with the correct level of support (management, technical and training), the process of successfully implementing Shibboleth IdP in disparate network environments is relatively straightforward. It has also gone a long way to dispelling the per-conception that installing Shibboleth is a costly, resource intensive and complex process. The project has demonstrated that Shibboleth is a suitable technology which every FE and HE institution in the UK can deploy and thereby take full advantage of the potential this architecture has to offer in linking a wide range of web-based applications.

Background

Kidderminster College and Cardiff University have been extensively involved with Shibboleth developments and federated access management over the past 4 to 5 years, having both worked independently as well as in partnerships on several JISC funded Shibboleth research projects, as indicated below. This accumulated wealth of experience in delivering Shibboleth support services to the FE and HE sector coupled with their successful ongoing collaboration in the “Cuckoo” project, led to the joint submission bid for the JISC Institutional Access Management Support Project funding. The partnership’s ultimate vision was to design, develop and deliver a programme of support to facilitate FE and similar educational institutions realise their objective of joining the UK Access Management Federation as an Identity Provider (IdP).



The scope of the project tender was to provide a support mechanism for smaller UK FE and HE institutions to implement FAM solutions to enable them to interoperate in the UK Access Management Federation. Within the project timeframe, commencing on the 7th January and ending on 31st August 2008, the main projected deliverable was to carry out between 64 – 70+ Shibboleth IdP implementations, thereby completing on average 2 installations per week. As the assigned service provider, the key operational task focused on delivering the technical requirements associated with steps 3 and 4 outlined in the JISC’s roadmap. This work involved several aspects including:

- assisting institutions, if necessary, to successfully manage each step of the roadmap
- installing and configuring the necessary software at each institution
- providing basic training to staff members enabling self-sufficient management of the installed software.

The project delivery was supported by a team comprising a full-time Project Manager to co-ordinate the workflow, a part-time finance and administration team, and three full-time junior and two part-time senior engineers to handle the technical aspects of the project. Together with a project e-mail address, a dedicated help desk providing technical support was made available for the participating institutions. A project website was also developed to keep institutions, and the JISC Access Management Outreach Team, up-to-date on their and the project’s progress.

Aims and Objectives

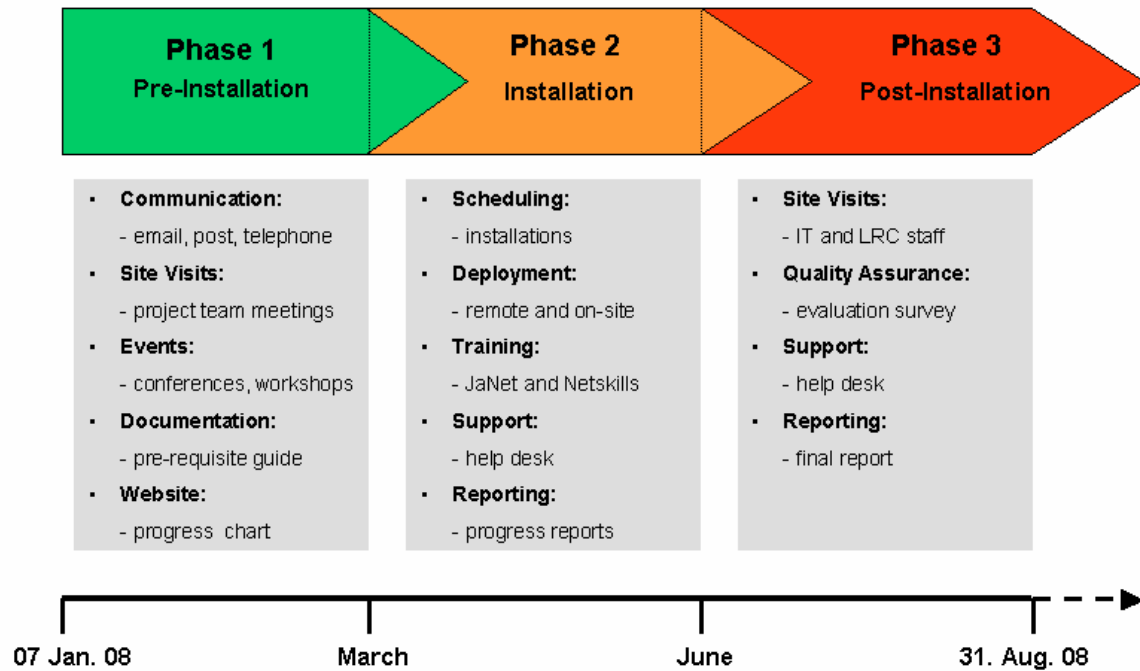
The aim of this project was to provide direct support (Shibboleth installation, training and technical) to the recommended list of JISC approved Institutions wishing to become a UK Access Management Federation Identity Provider by following the six step guide laid down by the JISC’s institutional roadmap. The project’s key objectives were:

- Help and guidance in completing the Institutional Audit
- Guide colleges in completing the technical pre-requisites (steps 1 & 2) for Shibboleth
- Install Shibboleth (v1.3) and configure the authentication software
- Supply easy-to-understand support documentation
- Provide basic training to strategic staff members (IT Services / LRC Managers)
- Offer roll-out technical support via a fully operational project help desk.
- Develop a project website to keep institutions up-to-date with their progress.

Project Management

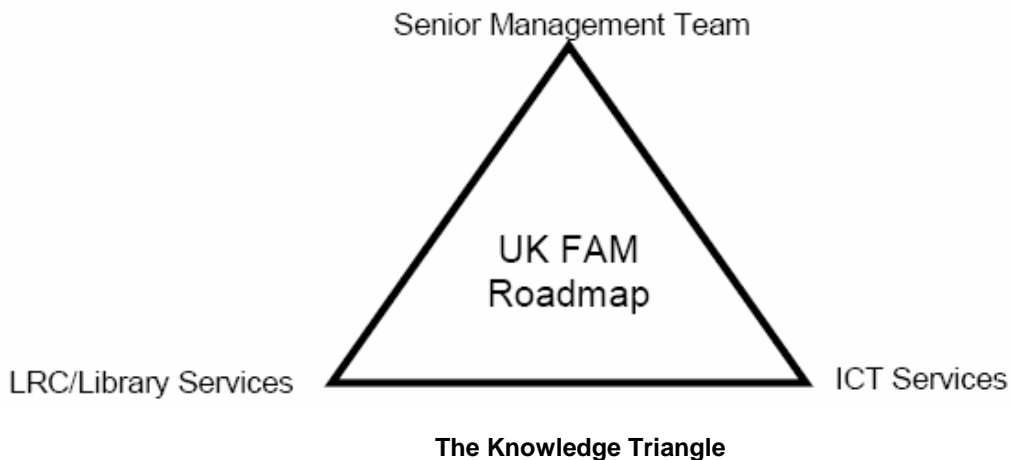
In terms of its management and logistical workflow, the project was essentially implemented in three key phases during its 8 months life cycle and these are described below.

Project Management Implementation



Phase 1 - Pre-installation

Fundamental to the efficient and successful management of the project was a proactive approach to communication. Thus, the primary objective at the start of the project was to liaise with all the institutional stakeholders involved (described by the Knowledge Triangle below) and to keep these three parties informed of the stages they were at in joining the UK Access Management Federation.



Working via email, post and telephone, initial contact was made with those colleges that had had their JIAMS application for technical support successfully approved by the JISC, with the purpose of introducing the FEIAMS project, its aims, objectives and team, (Appendix B), gauging their institutional preparedness to meet stages 1 & 2 of the roadmap, a pre-condition of their bid, and arranging, where necessary, a pre-installation site visit. In addition, Regional Support Centres (RSCs) were also contacted to jointly explore ways of engaging with FE institutions in their regions to firstly encourage further take-up of the support on offer via the JISC initiative prior to the final application deadline and secondly to facilitate those colleges which had successfully approved bids in meeting the project's and ultimately their Shibboleth IdP objectives.

Site Visits

Key to the project's service approach was to meet with the institutions involved in order to understand their project needs. One of the first tasks was to contact colleges to establish their support requirements and whether or not a site visit would be necessary. Consequently, the pre-installation visits were concentrated on those colleges who needed help to work through the pre-requisites before commencing with their IdP deployment. As the implementation process required close liaison with the colleges' assigned working groups and the project team, briefing meetings were held to discuss and agree upon a list of agenda items (Appendix C) with all the relevant parties concerned. To facilitate this process, a Pre Site Visit Information template (Appendix D) was sent out to survey each institute's existing infrastructure. The primary objectives of the briefing were to:

- provide advice and guidance on completing stages 1 & 2 of the JISC roadmap
- build a picture of current subscribed resources that were Shibboleth enabled
- agree a timeframe for the implementation of stages 3 & 4 of the JISC roadmap.

It was also important to ensure that institutes view the installation process not purely as a technical implementation but also as a way for staff, students and librarians to continue accessing vital e-learning resources.

The feedback received indicated that this face-to-face engagement in the early stages of the project proved to be very valuable and informative for the colleges, providing them with the impetus and confidence to move forward on the action points and issues raised in order to achieve a successful Shibboleth implementation and speedy project sign-off.

Events

A series of dissemination activities were organised in conjunction with a number of the RSCs with the aim of promoting the FEIAMS project and providing a better understanding of the Shibboleth technology involved. The events, (see section Dissemination Events) were well attended and received, with feedback indicating that *"a clear understanding of what needs to be done for federated access was gained"* whilst others found them *"useful as a kick-off for the project"*.

Documentation

A key success factor of the project was the production of the document: "Joining the UK Access Management Federation - Technical Support Guide" (Appendix E). The purpose of this documentation was to provide IT and Network Managers with a single, comprehensive reference, which consolidated all the technical pre-requisites needed for a Shibboleth implementation to ensure that these could be executed prior to the more advanced IdP software deployment being carried out by the project's engineering team. Throughout the life of the project, the guide was modified to account for the technical specifications of disparate network environments and models, version upgrades and changes to online resource access via the Federation Gateway Service. From the feedback received, the overall comments on the efficacy of the guide were very positive, with institutions viewing it as a helpful tool in their preparation to meet the initial technical steps independently. As a result, the FEIAMS Technical Support Guide was made publicly available for download on the JISC website:

<http://www.jisc.ac.uk/media/documents/themes/accessmanagement/prerequisiteguide.pdf>

Website:

The project was made visible via the FEIAMS website: <http://feiams.kidderminster.ac.uk> incorporating links to support documentation and a dynamic progress chart, which detailed the project outputs at each institute. The institutional progress bars were regularly updated allowing colleges not only to track their own deployment against the various milestones involved but also obtain an up-to-date progress overview of all the institutions participating in the project. Feedback received indicated that this monitoring tool was considered a useful feature of the website. An example of the chart is shown below:

Institution Progress Overview

Aquinas College	Initial Meeting Server Ready Attribute store implemented Authentication mechanism ready Firewall setup	SSL certificate ready Joined the UK Federation Install & configure IdP Registered IdP as an Entity Passed testing
Ashton Sixth Form College	Initial Meeting Server Ready Attribute store implemented Authentication mechanism ready Firewall setup	SSL certificate ready Joined the UK Federation Install & configure IdP Registered IdP as an Entity Passed testing
Barony College	Initial Meeting Server Ready Attribute store implemented Authentication mechanism ready Firewall setup	SSL certificate ready Joined the UK Federation Install & configure IdP Registered IdP as an Entity Passed testing
Belfast Met	Initial Meeting Server Ready Attribute store implemented Authentication mechanism ready Firewall setup	SSL certificate ready Joined the UK Federation Install & configure IdP Registered IdP as an Entity Passed testing

Phase 2 – Installation

Scheduling

Working with the agreed and final list of approved institutions provided by the JISC, deployment scheduling commenced following the closure of the JIAMS bid process on the 25th February. Of the applications received, 36 colleges that had met the bid criteria were selected by the JISC to receive technical support via the FEIAMS project.

Given the significant number of deployments that needed to be completed within the project's short timeframe, it was necessary for planning purposes to stipulate specific implementation dates. Although a degree of flexibility was built into the scheduling process, due to the tight timeline involved, there was very little slack in the system for adjustments and it was therefore important for institutes to agree and confirm their assigned slots as quickly as possible.

Project Deployment Timeline

Month	January				February				March					April				
Week commencing	7	14	21	28	4	11	18	25	3	10	17	24	31	7	14	21	28	
IdP Installs									2	1	1	1	2	2	2	3	2	2
Month	May				June				July				August					
Week commencing	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25	
IdP Installs	1	1	1	1		2	2	1	2	2	1	2	2					

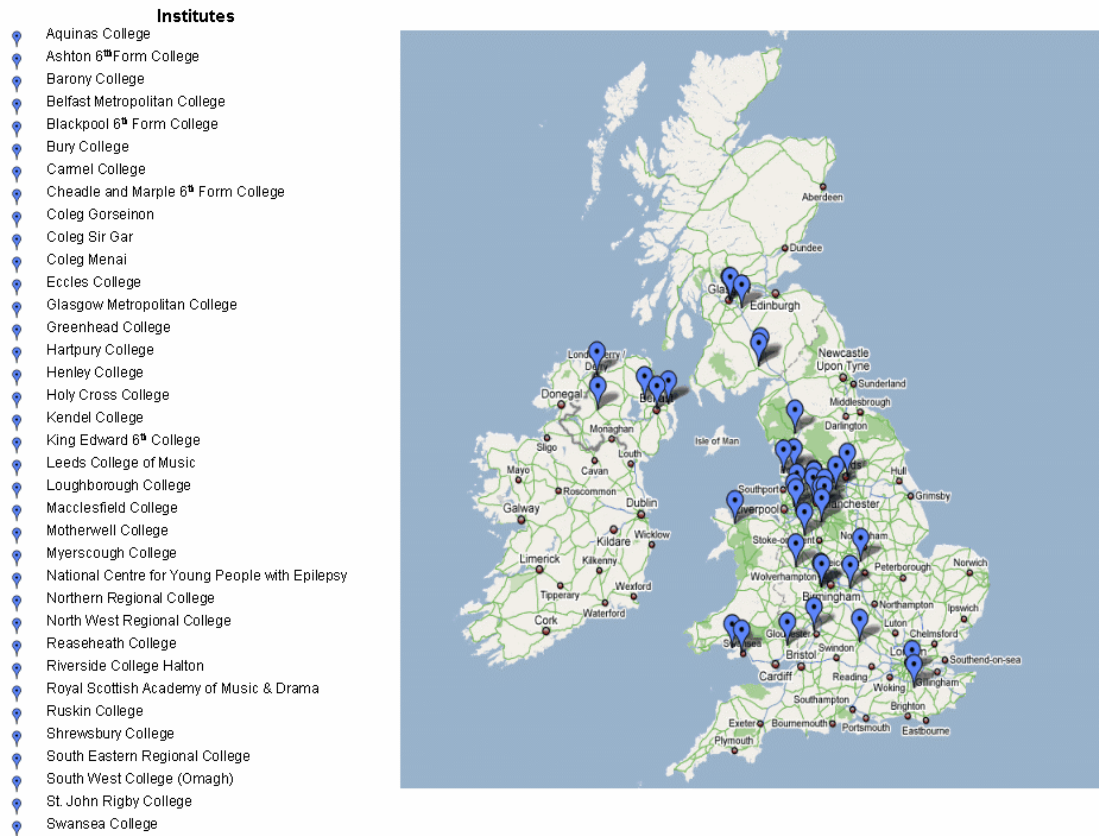
To facilitate an efficient workflow, installations were scheduled geographically and engaging with RSCs who had institutions eligible for support within their regions assisted in this planning process. A case in point was the scheduling of the Northern Ireland deployments where 5 of the 6 Area-Based Colleges (ABCs) had approved support. Working in close liaison with Mike Moran RSCni with regard to the arrangements, members of the FEIAMS team visited Northern Ireland from the 8th – 10th April 2008 to present a workshop session at the RSCni Annual Conference aimed at advising network support staff on how to prepare their infrastructures in line with the stages required by the UK Access Management Federation, and at the same time to focus on implementing Shibboleth IdPs as far as possible in four of the supported colleges (the fifth was subsequently visited in June 2008).

Prior to and throughout the life of the project, staff at RSC Northwest were very proactive in promoting the benefits of installing Shibboleth IdP as a FAM compliant technology and the technical support service on offer to institutes in their region (Appendix F). This supported effort was reflected in the number of colleges in the Northwest who were successful in their JIAMS bid, as indicated in the distribution map below, and

resulted in a close working relationship with the FEIAMS project team when scheduling and implementing IdPs in their area.

Distribution of Colleges by Region

The table and diagram below illustrate the number and distribution of FE and HE Institutes that were supported via the FEIAMS project



It was planned for all the implementations to be scheduled and completed before the 1st August 2008 to take account of the fact that the JISC funded Athens service ceased from this date onwards and also to use August as an overflow month to deal with any outstanding installation issues before the end of the project.

Deployment

Being a new and emerging technology, knowledge and production use of Shibboleth within the FE and HE community were relatively low. Consequently, as was expected, some institutions involved in the project required more help and guidance to work through the pre-requisites than others and opted for an on-site implementation. In those colleges which were more advanced in their preparation, IdP installations were carried out straightaway and a remote install was the preferred choice; a case in point was Ashton 6th Form College (Appendix G). Technical support and advice were at hand to resolve any technical difficulties via the project's dedicated help desk. The implementation support provided was a shared effort between the engineering team and staff at both Kidderminster College and Cardiff University.

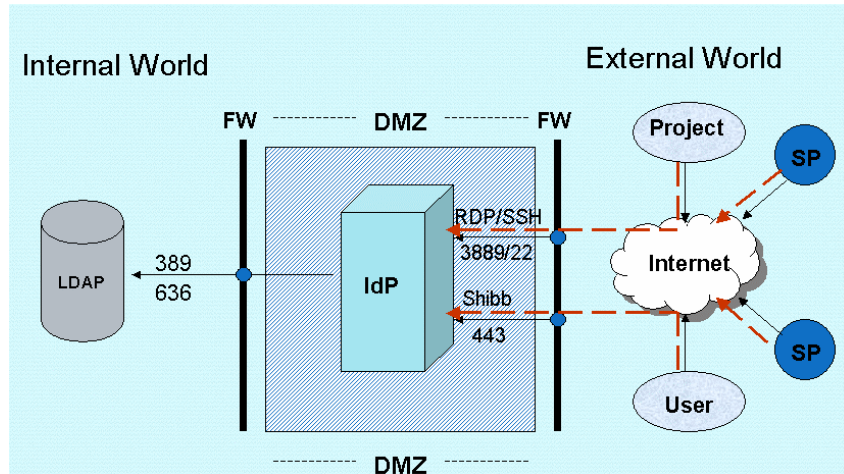
Implementations - Remote versus On-site

Description of processes and technical details, system customisation.

The remote installation requirements were assessed by the project's senior engineer who then contacted the college IT staff responsible for dealing with the issues raised in order to clarify any points highlighted and to agree upon a suitable plan of action for moving forward with the IdP deployment.



Remote Implementation



Due to the diversity of network environments, the Shibboleth installs tended to differ from site-to-site. This led to a series of technical difficulties being encountered during implementation ranging from integrating the actual software functionality in some environments through to the quality of attributes (eduPersonPrincipleName etc.) contained in the institutional attribute stores. The main teething problems encountered and how they were addressed are listed below.



Installation Issues Raised

Pre-requisite	Issue(s) Raised	Solution(s)
Access to Shibboleth server		
Access to attribute store	Updating user attributes in Active Directory	Scriptlets were produced to update directories / attribute stores
Access to authentication		
Firewall configuration	Not all technical staff were equipped with the skills to the open firewall	
SSL certificate	Difficulties in applying for correct certificates	
Joining the UKAMF	Difficulties in completing the Federation paperwork	
Return of appendix B	Some delays in returning the form	

Although the issues described above were the cause of some delay in completing installations as planned, they were relatively minor in nature and easily resolved. The overall results of the implementations undertaken were very positive, with a limited number of queries from institutions concerning the system to date. Feedback received on the technical support provided indicates a high degree of satisfaction with the service as evidenced by the following comments:

“The project was handled in a timely and professional manner”

“The support and installation was excellent, and extremely efficient. Rhys knew exactly what was required and implemented the installation very quickly – excellent” service

Lessons Learned

- Larger colleges generally had more IT staff and expertise, and wanted to be more hands-on in understanding the implementation process, in order to help them maintain the system later on. Smaller colleges with less staff generally wanted the IdP installed and configured with the minimum amount of effort from themselves as possible.

- FE colleges would generally rather Shibboleth contain the logic of transforming information from the directory into attributes (e.g. Shib calculating the eduPersonAffiliation by something like the container the user is in) rather than storing this information in the directory and having it calculated by some scripting run, say, every night.
- In Institutions where both library and IT staff were working together on this project, there was a greater understanding of the implications of the Shibboleth technology as a platform for access to on-line resources than in those where these two departments were more disparate (with rather less joined-up thinking).
- Some IT staff had trouble getting to grips with even the basics of the technology - because it's a very specific area of technology, and some IT staff in institutions were given the task of doing this project even though it was well out of the area of their expertise, obviously because there is simply a lack of effort available in small colleges. Some college had the internal expertise to self-sufficiently implement the technology up to a certain point and therefore required less technical support input from the Kidderminster team, whilst others lacked the required technical skills.

Training

Training played a significant part in helping institutional technical staff understand the deployment process and how to independently maintain their IdP. As part of the project commitment, basic technical training was provided to those strategic staff involved with on-site implementations in the form of hands-on practical sessions during installation. Furthermore, staff members from both Kidderminster College and Cardiff University were involved in creating and delivering Shibboleth core and advanced training modules on behalf of JANET (UK). Participating institutes were encouraged to attend these training sessions, as well as the JISC funded Netskills courses. Those technical staff who benefited from this Shibboleth training were better skilled to operate autonomously and thus in a position to opt for a preferred remote installation.

Support

The dedicated help desk manned by expert engineers five days a week (09:00am – 5:00pm), formed an integral part of the project's technical support service. As a function, it offered a central point through which institutes could access advice and guidance to resolve issues independently but also report problems, which subsequently received a managed and co-ordinated response. This was essential in terms of providing a quality backup service, thereby ensuring that colleges experienced a smooth, timely and successful implementation.

The majority of support enquiries received were mostly technical in nature and were responded to via e-mail and help desk telephone calls. In general, the support requests related to specific issues within an IdP implementation such as populating attributes, setting up certificates and trust relationships rather than to broad concepts and basic configuration. Feedback comments suggested that the technical support provided offered:

“Good advice and timely communication on technical and IdP installation issues”

Reporting

Through regular monthly reporting (site reports), meetings and telephone contact, the JISC Access Management Outreach Programme Manager, Mark Williams, was kept informed and up-to-date on both the institutional and project progress.

Phase 3 – Post-Installation

Site Visits

The purpose of this second round of site visits was twofold:

1. to gain feedback from IT managers on their Shibboleth IdP deployment, smooth out any remaining difficulties and provide further advice and guidance as required.
2. to survey Learning Resource Centre (LRC) Managers and Librarians on their understanding of Federated Access Management (FAM) and explain how they could fully utilise the installed software by demonstrating how to access a resource using Shibboleth, explaining Wayfless links and how to create/set them.

Given the changes to the funding of the JISC's Federation Gateway Service, institutions needed to consider the options available to gain guaranteed access to online resources beyond 1st August 2008. Thus, the visits also centred on helping college librarians audit their e-learning resources, assess which would be FAM compliant by the start of the next academic year and organise a plan of action to ensure continued external

accessibility to publisher resources where necessary. A brief summary guide was produced to assist with this process (Appendix H).

Engaging with the Learning Resources staff at RSC Northwest, Chrissie Turkington and Keith Wilson accompanied the FEIAMS Project Manager on these site visits to the participating colleges in their region, resulting in constructive and helpful meetings which were well received by the institutes involved:

“Meetings held at Aquinas College with the representatives from Kidderminster and JISC RSC Northwest, have proven to be very valuable and informative”.

Project Quality Assurance

As part of the FEIAMS quality assurance process to ensure that the project aims, objectives, outputs and deliverables were successfully met, an evaluation questionnaire (Appendix I) was sent to all of the institutes taking part in the project. The primary purpose of this survey was to elicit views on the management and execution of the services provided by the support team but also to ascertain opinion on the most and least valuable aspects of the project, and any other comments for improvement. The opportunity was also used to gauge future training and skills requirements. Of the 36 questionnaires sent out, 12 were returned by completion of this report, providing the basis for analysis.

Evaluation Feedback Summary					
	Excellent	Good	Adequate	Poor	Average
Pre-installation Information	3	5	3	1	2.83
Pre-requisite Documentation	4	5	2	1	3.00
Pre-requisite Advice and Guidance	3	6	2	1	2.92
Pre-install Tech Support	3	5	3	1	2.83
Deployment Scheduling	5	6	1	0	3.33
IdP Installation	4	5	2	1	3.00
Post-install Tech Support	4	5	3	0	3.08
Post-install Advice & Guidance	4	5	3	0	3.08
Help Desk	4	5	3	0	3.08
Project Website	3	6	3	0	3.00
Overall Totals	37	53	25	5	3.02 *

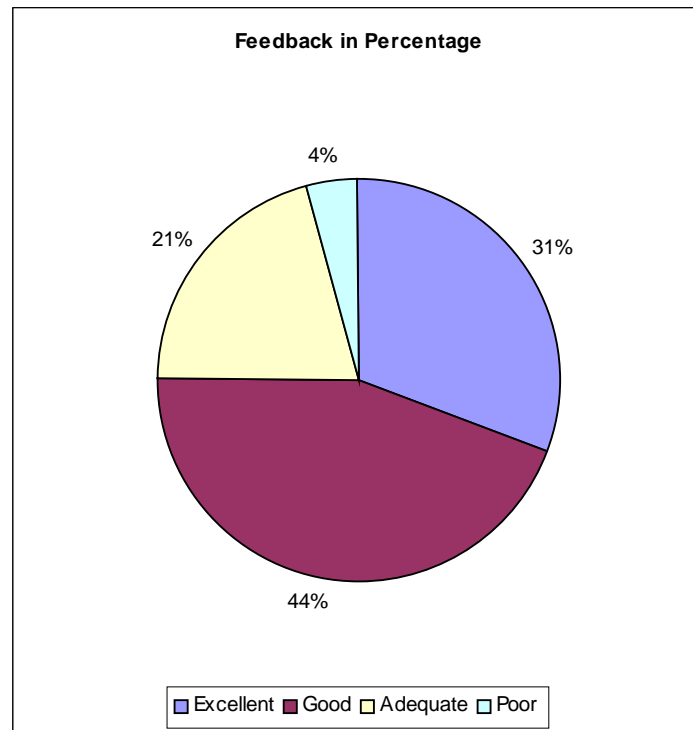
* Key for "Average" column: 4 = Excellent 3 = Good 2 = Adequate 1 = Poor

An examination of the categories shown above indicates that the overwhelming majority of respondents were well satisfied with the service and support provided by the project team, rating an overall average (3.02) between good and excellent. This is further evidenced by additional comments included in the feedback such as:

“Absolutely excellent install and config. on the day. Most impressed”

“The project was handled in a timely and professional manner”

Furthermore, referring to the pie chart below, it can be seen that approximately three-quarters of the responses rated 'good' (44%) or 'excellent' (31%), with a small minority rating poor (4%).



Closer inspection shows that the negative response rating related mainly to the pre-installation preparation services and support categories. Coming at the start of the project, the cause for dissatisfaction with these services could be associated with the fact that some smaller institutes were experiencing difficulties in meeting their bid commitment to have the technical pre-requisites, steps 1 & 2 of the roadmap, in place prior to receiving support via the FEIAMS project. Meeting this pre-condition without advice and guidance proved less manageable in a minority of cases.

A sample of the feedback concerning the 'least and most valuable aspects' of the project and in answer to where it could have been 'more beneficial if' is summarised below.

The most valuable aspects:

- Benefiting from the project team's expertise made implementation much easier.
- Achieving e-Resource accessibility equal to larger and better resourced colleges.
- Helping to enhance internal communication.
- Streamlining the log in process through single sign-on access to learning resources for students
- Integrating and linking Shibboleth with Active Directory.
- Benefiting from the site visit which clarified many aspects of the process.
- Providing straightforward access to resources by removing the need for more passwords
- Saving on technical and e-learning resource costs.

The least valuable aspects:

- Communication relating to how Shibboleth works and is maintained
- Documentation that was overly complex from an IT point of view
- The lack of communication in-house
- Complicated and inappropriate bid process for small institutions
- The lack of a post-project website or helpdesk support
- The lack of a checklist of tasks required to be undertaken.

More beneficial if:

- a 'cookbook' guide describing LDAP and CRON details, files for modifying and software versions
- a detailed technical, registration and certification checklist would be invaluable.
- a dissemination event for Learning Resources staff
- a session on setting up the WAYFless links for online resources
- a set of online guides and training materials for end-users.

In response to the survey question relating to on-going training needs for strategic staff involved with federated access management, the main areas and competence levels highlighted by respondents were for more core and advanced training skills in Federated Access Management for IdP. As expected, the feedback also indicated that colleges were keen to be kept informed of related training and support provided within the education community.

Institutes who had attended either JANET (UK) or Netskills courses recommended these as a means of obtaining the basic and advanced skills relating to federated access management and Shibboleth technology.

Overall, it can be concluded that participating institutes were satisfied with the implementation, service and support provided by the FEIAMS project with only minor concerns being raised throughout the whole process. It was however noted that producing a revised, more concise and unified set of documentation covering all technical angles and learning resources access management issues would be a beneficial future improvement.

Support

It was agreed that support (help desk and email) would remain open until the end of 2008 to deal with any existing queries arising at the start of the new academic year and to honour the project commitment made to institutions whose planned installation completion dates were delayed until after the official closure date of the project.

Reporting

A final report describing the project's implementation, output and results was produced at the end of the project with the view of disseminating the lessons learned to the wider FE and HE community.

Dissemination Events

Wolverhampton

RSC West Midlands – FAM - Making the Business Case in your Organisation – 5th Feb. 2008

This event, aimed at Technical Managers, ILT Managers, Librarians/LRC Managers and Senior Management was held to put forward the case for Federated Access Management (FAM) technology. Input from the JISC FAM team was supported by a Kidderminster College presentation, which provided a case study summary of their Shibboleth experiences and an explanation of their service provider role in the FEIAMS project.

Cardiff University

JISC Institutional Access Management Support - Video Conference - 18th March 2008

Using the excellent facilities at Cardiff University and the JANET (UK) Videoconferencing service, a support briefing was staged in conjunction with Mark Clarke RSC SW Scotland. The aim of this forum was to explain the steps and processes involved in deploying a Shibboleth IdP. Registration was limited to those Scottish colleges who had applied for FEIAMS technical support via the JISC Institutional Access Management Support initiative. A total of 12 delegates attended comprising a target group of Senior Management, IT Services and LRC staff.

Anglia Ruskin University

RSC Eastern Online Event - Getting Ready for Federated Access Management - 6th March 2008

This on-line dissemination event using Instant Presenter was organised in conjunction with Maryse Fisher RSC Eastern. The aim of this event (held in two sessions) was to explain the FEIAMS project process and provide guidance in meeting the pre-requisite steps of the JISC roadmap in preparation for joining the UK Access Management Federation (UKAMF) as an Identity Provider (IdP). The discussion included institutional audit, planning and scheduling resources, completing paperwork in joining the UKAMF, applying for certificates and any other technical issues raised.

Belfast

RSCni Annual Conference – Taking e-Learning Forward – 9th April 2008

In parallel with arranged site visits to the Northern Ireland colleges, this event provided an opportunity to make face-to-face contact with the technical support staff responsible for dealing with Shibboleth installation issues in their respective institutes. The workshop session 'Joining the UK Federation: Assessing Your Readiness' was directed at this target audience, focusing on the technical aspects of the project and clarifying the deployment process and procedures.

Birmingham - Ashton Business School Conference Centre

Shibboleth 2.0 Install Fest – 1st - 2nd July 2008

This two-day course was organised by senior members of the FEIAMS project team (Rhys Smith and Ed Beddows) in conjunction with international colleagues of Internet2 and SWITCH consortiums. The aim was to provide the 20 delegates, who were specially invited key members of the community, with an overview of the newest version of Shibboleth (both the Identity Provider and Service Provider components), and practical experience of using it.

Conclusions

The ultimate objective of the project was to ensure the implementation of a Shibboleth IdP in the FE and HE institutes that had successfully applied for support under the JISC Federated Access Management Support initiative by the 31st August 2008. Evidence from the project progress chart and feedback received from the institutes involved would suggest that this goal was satisfactorily met.

The overall, general view from the Institutes involved in the project is that Federated Access Management is a positive future step and they consider that the JISC funded initiative has provided many benefits not only in terms of offering a simpler, single-sign-on system for staff and students to access Shibboleth protected e-learning resources but also in opening up the opportunity for greater inter-institutional collaboration. They were pleased to have received the technical support and have been satisfied with the way in which the project has helped them reach and move forward with their FAM objectives.

Kidderminster College and Cardiff University will continue to develop and promote the future use of Shibboleth within the FE/HE community and use their collected expertise to offer technical support to those institutions wishing to further develop their Federated Access Management capabilities.

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Appendix A – JISC Access Management Institutional Roadmap



Appendix B – Introductory Letter



Tel: Technical Support 01562 512099
Tel: Project Enquiries 01562 744348
Email: Project Manager khoneyball@kidderminster.ac.uk

Dear

My name is Karin Honeyball, Project Manager of the “Further Education Institutional Access Management Support” (FEIAMS) project. I will be supervising the delivery of the technical support that you successfully applied for via the JISC Institutional Access Management Support Program, with the aim of facilitating your Institute’s smooth transition to joining the UK Access Management Federation as an Identity Provider.

Acting on behalf of the JISC and Mark Williams as the assigned service provider, Kidderminster College, in collaboration with Cardiff University, has been given the task of implementing the technical requirements associated with the preparatory steps 3 and 4 outlined in the JISC’s Federated Access Management roadmap.

This work will involve installing and configuring the authentication and Shibboleth software. In advance of this being carried out, steps 1 and 2 of the roadmap should have been completed by your Institute. However, where these prerequisite issues remain unresolved, guidance in finding appropriate solutions will be available.

In addition, basic training will also be provided to enable strategic staff members to manage the installed software independently and easy-to-understand support documentation will help staff get-to-grips with the fundamentals of Shibboleth Identity Provider (IdP) deployment.

I shall be contacting you shortly with a view to discussing your project needs and in line with these, to arrange an on-site visit by our service Engineers.

In the meantime, if you require any further information, advice or guidance, please feel free to get in touch with me at: khoneyball@kidderminster.ac.uk or alternatively, call our dedicated technical support helpdesk on: 01562 512099.

The FEIAMS team is looking forward to assisting your Institute on the road to Federated Access Management.

With kind regards

Karin Honeyball
Project Manager
FEIAMS

Appendix C – Institutional Audit

Institutional Audit

- Arrange Strategy Meeting with SMT/LRC/IT Services
- Assess Server Requirements
- Organise Directory Development
- Verify Attribute Requirements
 - check UK Federation website
 - update schemas
 - update attributes regularly
- Review Authentication Development
- Set Up Firewall Access
- Obtain a Certificate
- Join the UK Access Management Federation
 - Establish an IdP Implementation Timeline.

Appendix D – Pre Site Visit Template

Pre Site Visit Information

To assist with completing this form, please read the attached prerequisite guide (Appendix D shows a sample).

Institute:

Date:

Present:

<Institute>	Kidderminster College

Objective(s):

- To provide advice and guidance on completing stages 1 & 2 of the JISC roadmap
- To build a picture of current subscribed resources that are Shibboleth enabled
- To agree a time frame for the implementation of stages 3 & 4 of the JISC roadmap.

Background:

(Please provide a brief summary i.e. member of UKAMF)

Current Technology:

(Please enter an outline of your current IT infrastructure)

Subscribed Resources:

(Please enter, or attach a copy of, your subscribed resources and mode of access)

Points for Discussion:

(Please enter points requiring clarification)

Action Points:

Action	Institution	Person	Deadline

Conclusion

(Please propose a convenient timeline for IdP implementation)

Appendix E – Pre-requisite Guide

Visit <http://feiams.kidderminster.ac.uk/uploadedfiles.php> for the latest version of the technical support guide.

Appendix F – RSC Northwest Report

During the 2007/08 academic year Chrissie Turkington and Keith Wilson from the JISC RSC Northwest (RSC NW) were involved in providing support for the JISC Institutional Access Management Support Project (JIAMSP). The RSC NW had very early on recognised the benefits that installing Federated Access Management (FAM) technology could provide across the Learning and Skills sector and how this particular project could assist smaller Further Education and Sixth Form Colleges within the Northwest region to obtain the skills required and implement a Shibboleth Identity Provider.

For many of these colleges the concept of their own FAM implementation had been seen as a pipe-dream; something that could provide the first stages towards a centrally managed single-sign-on solution for all authenticated college systems and resources, but totally unreachable and something solely for larger HE and FE Colleges and universities. Therefore we identified the need to promote the project to all eligible colleges, and try to make this pipe-dream a reality.

We adopted the triangular model being promoted by the JISC Access Management Team of arranging meetings with the Library Manager, the Network Manager and the member of senior management responsible for either or both of the services. The primary aim of the meeting was to discuss the benefits and potential cost savings that the project could provide their institution, promote the importance of getting support whilst it was available through the JIAMSP and the JISC funded Netskills training, and assessing whether they could meet the pre-requisites (stage one and two of the JISC Access Management Institutional Roadmap). Listening to the discussions during these meetings was extremely interesting: new working relationships were established as all attendees appeared to relish the opportunity to work together on a single project, and a lot of perceived barriers across departments were dispelled.

We provided assistance to those writing the application bid to JISC, which was a new experience for many. This assistance appeared to be invaluable – the amount of phone calls and emails being sent and received in the week prior to the second submission date was high and an extremely encouraging reflection on how valuable the achievement of a successful application to the JIAMSP had become.

Throughout the lifetime of this project, we have worked closely with the team from Kidderminster College who, along with Cardiff University, were successful in bidding to provide the support for the JIAMSP. We liaised closely with Karin Honeyball, the FEIAMS Project Manager, to minimise potential Identity Provider (IdP) installation risks through encouraging and supporting the colleges in meeting their agreed pre-requisites, obtaining network security certificates through JANET(UK) and applying for membership of the UK Access Management Federation. We also accompanied Karin on a second round of visits which focussed on how staff working within Libraries and Learning Resource Centres could utilise their newly installed IdP which were very well received. This relationship between an RSC and a JISC Project team has proved to be extremely productive and resulted in the establishment of a good model which can be replicated and utilised for the provision of RSC support for other JISC projects.

Without the support from the JIAMSP I very much doubt that these colleges' pipe-dreams of FAM implementation would have been fulfilled in such a short timescale, if at all. The technical support available to the colleges supported through this project has been invaluable. However, there is still plenty to do including the need to train Network Support Staff on the maintenance of their IdP installation and continued work with publishers to encourage them to become FAM compliant. With this in mind, the RSC Northwest team are now planning support for Federated Access Management over the next couple of years to build upon the work already completed:

- Support, using the same model as 2007/08 for Learning Providers implementing IdPs during "Phase Two" (2008/09)
- Further advice, guidance and "How Tos" for library colleagues with "Phase One" IdP implementations
- Provision of cross-region self-support forums for "Phase One" IdP implementation Network Support staff
- Support for Network Support staff who implemented an IdP during "Phase One" with their Service Provider (SP) implementations

This project has opened up a lot of opportunities for the Learning and Skills sector. Becta's work to encourage Regional Broadband Consortia to also adopt the technology has unlocked the potential of FAM technology through the potential for mini-federations across all sectors.

JIAMSP has also gone a long way towards dispelling the myth that installing FAM technology is a time and resource consuming project. The results have proved that an IdP installation in a small FE College can be done within a short timescale provided that support is available from the college management team, the concept of Federated Access and single-sign-on is in-line with college policies and external assistance and training is available if required.

At the end of this project, in the Northwest there will be approximately 40% of Further Education and Sixth Form Colleges with a live Shibboleth Identity Provider installed through the support provided by the JIAMSP, other third party providers and the JISC funded Netskills courses.

Chrissie Turkington
eLearning Adviser (Learning and Teaching Resources)
JISC RSC Northwest
July 2008

Appendix G – Ashton Case Study

ASHTON SIXTH FORM COLLEGE

FEDERATED ACCESS MANAGEMENT - A CASE STUDY

Ashton 6th Form College has approximately 2000 students each year studying on a range of GCE and vocational courses. There are approximately 200 staff on site.

The network infrastructure is based on Windows Server 2003 with Active Directory. The college has many network facilities including electronic registers; MIS; Heritage library catalogue; financial accounting; email; VPN; and VLE using Moodle.

In summer 2007 the eLearning Group took the decision to implement Shibboleth to remove the need for separate logins to the network and Moodle. The rationale behind this decision was to support students who continually needed to have their Moodle passwords changed because they did not match their network logins and to support Athens resources in preparation for summer 2008.

In May 2007 Ashton 6th Form College had undertaken Moodle administration training with Kidderminster College and was very happy with the support given. We then bought in support from Kidderminster for Moodle so the logical extension of that was to commission Kidderminster to install and support Shibboleth.

Shibboleth was installed during August and September 2007 and was working with Moodle giving staff and students a single ID on the network. One of the main issues with the installation was the lack of server certificates on the network, this resulted in certificate error messages when logging in.

In January 2008 we were advised by RSC-Northwest that we were eligible to apply for the JISC Federated Access Management project as we were an existing Shibboleth user. The application was completed and accepted and we were advised that Kidderminster and Cardiff University would be supporting our move to become an IDP.

In preparation for the project work an application was submitted to JANET for server certificates for the Shibboleth server, the VLE server and the mail server. The college's Network Manager also registered for a Netskills course on Federated Access Management so that there was some understanding of the process within college.

An initial meeting was held with the Project Manager and support staff from Kidderminster and Cardiff University where it was identified that one of the issues to be resolved was server certificates.

This was a lengthy process because of the various steps involved in the application. As a 6th form college we do not have Articles of Membership or any similar document. In the end we submitted evidence of funding from LSC to prove that we were a valid entity. The certificate process took quite a while and was only completed with the help of staff from Kidderminster. It is an unduly complex process that needs some experience to navigate through. Our feeling is that the process isn't quite clear especially when responding to emails. We feel that it is a little excessive for all named parties to have to respond before any action is taken.

Another issue highlighted at the initial meeting was the structure of Active Directory and the Network Manager was asked to make some changes, which he duly completed during the February half term holiday.

The next step was to apply to the UK Federation to become an IDP. Appropriate staff were identified for the application and this was sent off towards the end of February. An issue arose around this when the Federation sent emails to the named personnel and one member of staff failed to respond, consequently there was a delay until this oversight was noticed.

Several technical issues were encountered along the journey but these were overcome with the support of staff at Kidderminster. As the college already had a working relationship with staff at Kidderminster it was reasonably easy to resolve issues as they arose. Issues mainly related to network configuration and server certificates and their installation. With remote access to the college network these were resolved by Kidderminster.

Ashton 6th Form College is now a member of the UK Federation and the LRC Manager is now registering all our resources as being Shibboleth enabled. We would not be at this point now without the support through the JISC project.

Perhaps the biggest problem with the project is that college staff have not built up any expertise in the process of setting up the IDP so if something goes wrong at any point there is no skill set in place to resolve those issues. We would suggest that for future installations the technical support staff of colleges are involved so that they can fully understand what is going on and can build up their own expertise for the future maintenance of Shibboleth and the IDP.

Overall the project has been a painless and reasonably stress free process.

Appendix H – Implementing FAM in Libraries

Implementing Federated Access Management in Libraries

The first thing that all Library Managers need to do is develop a plan of action as follows:

1. Conduct an audit of e-learning resources by compiling a list of all online resources the library subscribes to using Excel, specifying each resource.
2. Review and assess which resources will definitely be using FAM technology by the start of the next academic. A traffic light system for identification might be useful e.g.,
 - green - resources that will definitely be there if they are not already
 - amber - resources that are working towards it but with no guarantees
 - red - resources that the college should be contacting for an update.
3. Update on FAM compliant Service Providers by checking the following websites:
 UK Federation: <http://www.ukfederation.org.uk/content/Documents/AvailableServices>
 JISC Blog: <http://access.jiscinvolve.org/federated-access-and-publishers/>
 To obtain a current update, consider subscribing to the JISC Shibboleth Announce and Libraries listing. Remember that any resource that is part of the JISC Collections will either be working towards or already FAM compliant by the 1st Aug.
4. Consider the best access route for each resource (taking into account all user groups, including 'non-members', e.g. visitors)
5. Ask the question: is external access to all resources necessary at the moment or would on-campus IP authentication access be sufficient?
6. Contact directly Publishers of resources that aren't Shibboleth compliant to obtain an accurate update on their current federation status and what their plans are (create a standard email to send to all publishers to obtain a clearer picture).
7. Liaise directly with each publisher to organise external access to specific resources via an institutional username and password arrangement, if necessary. This would provide a stop gap if only a small number of resources required were not yet FAM compliant but should be in the near future.
8. Discuss with IT services the feasibility of employing a web-proxy solution to gain access e.g., using a 'shibbolised ezProxy': <http://www.oclc.org/us/en/ezproxy/>.

Further advice on the technical side of this issue is available from Rhys Smith, Consultant Engineer at Cardiff University.

Other useful links:

JISC federation support pages for library staff

www.jisc.ac.uk/whatwedo/themes/access_management/federation/federation_libraries.aspx

JISC 'Federated Access Management: Guide for Academic Libraries Briefing Paper

http://www.jisc.ac.uk/publications/publications/pub_accessmanagementbps/accessmanagementlibrariesMar2008v1.aspx

SCONUL event (07 March 2008) - Event's audio and presentations are available on:

<http://www.jisc.ac.uk/events/2008/03/jiscsconul.aspx> .

Appendix I – Evaluation Feedback Template

As part of the FEIAMS quality assurance process, we are keen to ensure the project aims, objectives and outputs have been successfully met. Your views are essential in helping with this evaluation. Therefore, we would kindly request that you take a few moments of your time to complete this form as fully as possible and return it to: feiams@kidderminster.ac.uk

Institute Details

Institution		
Respondent		Job Title:
Contact Details	Tel:	Email:

Please comment on the following by ticking ✓ one box on each line

	Poor	Adequate	Good	Excellent
Pre-installation Information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pre-requisite Documentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pre-requisite Advice and Guidance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pre-install Technical Support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deployment Scheduling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IdP Installation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Post-install Technical Support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Post-install Advice and Guidance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Helpdesk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Project Website	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please comment on the following aspects about the project:

The most valuable aspects.....

.....

The least valuable aspects

.....

The project would have been more beneficial if

.....

Any further comments.....

.....

Training

In the table below, please indicate the on-going training needs for strategic staff (ITS, LRC etc.) involved with access management by ticking ✓ the skills area and competence level(s) required.

Skills Area	Training Required		
	None	Core Skill	Advanced Skill
Federated Access Management for IdPs			
Federated Access Management for SPs			
Moodle			

Would you like to be kept informed regarding related training and support provided within the education community?

Yes

No

Further Requirements

Please provide any further suggestions you may have on the following project issues or other areas covered, or not yet covered.

Technical Support	
Documentation	
Training	
Others	

Comments

Please provide any comments on how the support service can be of future help

.....

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Thank you for completing the evaluation questions