Project Architectural Design

P0108 Partner Colleges

Prepared By: adixon6@salford.ac.uk

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| Owner(s): | Gregg Barron, Project Manager |
| Author(s): | Anthony Dixon, Digital Architect |
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|  |
| --- |
| Consultation (List relevant technology & business stakeholders) |
| Gregg Barron, Project Manager |
| Patrick Maloney, Business Analyst |
| Andrew Bourne, Library Services |
| Tim Harris, Solution Architect |
| Lawrence Lilley, Associate Director - Digital Design |

|  |  |
| --- | --- |
| Approvals | |
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# Executive Summary

The University has entered into business relationships with a number of external Partner Colleges to allow their students free and unfettered access to the University of Salford’s library resources. However, this contravenes the existing licensing agreements that the University has with some resource Content Providers.

The solution will address this issue by amending the existing technical solution to allow the Content Provider the ability to conduct an authorisation procedure that will restrict their eLearning content based on the student’s Partner College.

# Problem Description

The University of Salford has partnership programmes with three colleges which are due for renewal in September 2018. From a financial perspective, these partnerships are lucrative to the University with the number of such partnerships set to increase in future.

The current technical solution does not allow a means for our Content Provider to facilitate an authorisation process to limit the resources available to our Partner Colleges. As a result, our Partner Colleges have unlimited access to our Content Suppliers’ learning resources, a situation that contravenes the licensing agreements between the University of Salford and Content Provider. Consequently, our Content Providers are indicating that they will withdraw this service unless the situation is rectified. Withdrawal will impede the Library Service’s ability to fulfil its commitment to provide learning resources to both University of Salford students and students of Partner Colleges. If this occurs, University of Salford will suffer considerable loss of its revenue derived from its Partner College agreements, as well as significant reputational damage.

## Business vision diagram

Figure 1 shows the business vision diagram. For a detailed explanation of the notation used, see section 8. A narrative description on the diagram can be found in section 2.2.



Figure 1: Business vision diagram

## Business vision statement (narrative for the diagram)

The [Driver] is threefold: to protect the existing revenue stream, the business relationships between the University of Salford and its partners, and to avoid reputational damage. This is to be achieved by ensuring the University of Salford Library Services is compliant with the existing license agreements between the university and the Content Provider in respect of Partner School access rights - [Goal]. The solution will entail a number of technical changes to provide the Content Provider with an attribute to enforce content authorization. This needs to be in place before September 2018. [Objective]. The [Measure] of success will be the provision of the service under the agreed licensing arrangements.

Library Services [Organisational Unit] has a business relationship with the External Content Provider [Actor] who Provides Content [Role] in order to fulfil the Provision of Learning Services [Function]. Library Services owns the Provision of Learning Services [Function]. Partner Colleges [Organisation Unit] contains the Partner Student [Actor], who access content [Role] in pursuit of the Provision of Learning Services [Function].

## Issues to be addressed

The issues to be addressed relates to our Content Providers inability to fulfil an authorisation function arising from a shortcoming with the University of Salford authentication process.

We need to allow our Content Providers a means of controlling the level of access that partner students have over their content. This can be achieved by the provision of an extra attribute that will allow the Content Provider to identify the student as a member of a Partner College. This attribute must be passed to our Content Provider during the University of Salford authentication process. The Content Provider can then perform its authorisation process, granting access to content based on the location of the person accessing it.

## Change drivers and opportunities

The key benefits the project expects to realise are listed below:

* To satisfy Content Provider licensing conditions for online Partner College provision and eliminate the risk that the Content Provider will withdraw the service to provide learning resources
* To protect the revenue stream provided by our existing business relationships with Partner Colleges
* To provide a basis from which we can extend the number of relationships with Partner Colleges and further increase revenue
* To protect the reputation of the University of Salford as a provider of high quality educational content

# Architectural Alignment

|  |  |  |
| --- | --- | --- |
| Level | Description | Design score |
| -2 | Adds a capability contrary to target state | 0 |
| -1 | Decreases a capability from target state |
| 0 | Aligns with target state |
| 1 | Enhances a capability in line with target state |
| 2 | Adds a capability in line with target state |

A tactical solution was adopted due to severe time constraints in delivery timescales. Presently, the solution has no clearly defined life span. It is anticipated that the University’s current identity management capability will need to be upgraded/migrated to a federated cloud based system in the near future, however it was not possible to complete this task due to the urgency of this specific requirement.

# Stakeholders

|  |  |  |
| --- | --- | --- |
| **Who** | **Role** | **Unit** |
| John Whitlow | Chief Information Officer | Digital IT Service Provision, Management and Support |
| Angela Walker | Digital Library Manager | Library Services |
| Lawrence Lilley | Associate Director – Digital Design | Digital IT Service Provision, Management and Support |
| Nasrin Fazal | Associate Director – Digital Delivery | Digital IT Service Provision, Management and Support |
| Simon Townley | Associate Director – Digital Service | Digital IT Service Provision, Management and Support |
| Mark Wantling | Associate Director – Digital Strategy Office | Digital IT Service Provision, Management and Support |
| Prof David Spicer | Dean of Salford Business School | Salford Business School, UoS |

# Objectives / Critical Success Factors

The key objectives of the Partner Colleges project are to:

Provide our Content Providers with the ability to conduct an authorisation process to control the level of access Partner College students have to their learning resources, and to use the campus code as the basis of doing so.

Ensure that the end to end solution is implemented before mid-September 2018.

# Actors, roles and responsibilities

## Human actors

The table below lists the human actors and roles in scope for the target architecture.

|  |  |
| --- | --- |
| **Actor** | **Role** |
| Partner College | Student accessing learning materials |

## Digital actors

The table below lists the digital actors and roles in scope for the target architecture:

|  |  |
| --- | --- |
| **Actor** | **Role** |
| Content Provider | Provides learning resources |
| University of Salford | Provides access to learning resources |

## Other actors

|  |  |
| --- | --- |
| **Actor** | **Role** |
| Digital IT | Manage the authentication service |
| Library Services | Manage service with Content Providers |

# Architectural Model

Figure 2 below shows the business vision diagram. For a detailed explanation of the notation used, see section 8. A narrative description on the diagram can be found in section 9.



Figure 2: Architectural model diagram

## Description

This section contains a narrative for the architectural model in Figure 2.

The Partner College Access [Business Service] uses data concerning student accounts details [Data Entity] and campus codes [Data Entity] to authenticate and authorise users from the University of Salford and other Partner Colleges.

Access to the provider’s content is achieved via the Access Proxy [Physical Technology Component] which is realised by two components, the Proxy Access Authentication [Logical Technology Component] and the Content Provider Service [Physical Application Component] which in turn realises Content Access Authorisation [Logical Application Component]. The combination of authentication and authorisation implements the business service, granting access to the correct content, based on the user’s location (campus code).

## Capabilities

### Data

Data items introduced, amended and/or decommissioned.

|  |  |  |  |
| --- | --- | --- | --- |
| **Ref** | **Capability** | **Description of change** | **New/Changed/Amended** |
| D1 | Student Account Details | Add Campus Code attribute to student record | Amended |

### Application

Application capabilities introduced, amended and/or decommissioned.

|  |  |  |  |
| --- | --- | --- | --- |
| **Ref** | **Capability** | **Description of change** | **New/Changed/Amended** |
| A1 | Content Access Authorisation | Provision of authorisation process | New |
| A2 | OpenAthens | Change content of authentication process (campus code) | Change |

### Technology

Technology capabilities introduced, amended and/or decommissioned.

|  |  |  |  |
| --- | --- | --- | --- |
| **Ref** | **Capability** | **Description of change** | **New/Changed/Amended** |
| T1 | Access Proxy Authentication | Re-configure to pass the Campus Code | Changed |
| T2 | Content Access Authorisation | Provision of authorisation process | New |
|  |  |  |  |

## Architectural principles adherence

The purpose of this section is to describe how the architecture adheres to the Architectural principles:

| **Ref** | **Principle** | **Justification** |
| --- | --- | --- |
| Principle 1 | Seek to innovate | The target technical solution requires innovation within the scope of the existing solution |
| Principle 2 | Open up access | This solution adds an authorisation process |
| Principle 3 | Speed to value | Solution is tactical – business value expected to be realised quickly |
| Principle 4 | Simplify the end-to-end | Solution does not adhere to this – end-to-end is complex |
| Principle 5 | Reuse – buy – build | Reuse is a key theme in this solution. |
| Principle 6 | Manage technical diversity | Solution does not adhere to this – solution is too reliant on a diverse range of technologies |
| Principle 7 | Consider data first | Data first approach is not a driver |
| Principle 8 | Privacy by Design | This solution adds an authorisation process |
| Principle 9 | Fit-for-purpose | Solution provides additional security improvement |
| Principle 10 | Focus on customer experience | Impact to the end-user will be transparent |

## Constraints

The main constraint is the time limitation. The solution must be implemented before mid-September 2018.

A secondary constraint is that the low level technical solution needs to be known in detail to assure the University of Salford that they can commit to signing the contract without the solution in place.

# Appendix: Business Vision Legend/Key

The following diagram shows the legend for the notation used in the business vision diagram ([section 2](#_Business_vision_diagram))



# Appendix: Architectural Model Legend/Key

The following diagram shows the legend for the notation used in the architectural model diagram [(Section 7.1 above).](#_Architectural_Model)

