

# Use Cases

## Breakdown of Use Cases for ABE Resource Server

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### Student - Level 2 - CompSci/Maths

#### **Attempting to download JOOSE2 coursework.**

Student wants to login to service and browse/search for resources of their JOOSE2 course. They may even be searching for the JOOSE2 coursework file directly. This file should show to the student if (and only if) they have certain attributes (listed below as considerations) such as enrollment in the JOOSE2 course. The metadata of the resource is compared to the student's account for this show/hide service. If they find the resource then the student would like to download the file and decrypt the contents using their Key.

#### Considerations:

- coursework may be uploaded in advance of handout deadline
- owner/lecturer may have the file set to staff only
- student must be enrolled in the course
- student must be in level 2
- although a level 4+ student may be a demonstrator
- ✓ - student must have an active account
- student should be in the university network (???)
- coursework solution should **not** be accessible, just handout/cover sheet

### Student - Level 4 - CompSci

#### **Attempting to upload WebSci coursework submission.**

Student wants to upload an encrypted resource to the server. The resource should be encrypted with a set of attributes allowing themselves, the lecturer and any required external markers to decrypt the submission for marking. No other students or unnecessary staff should have the correct attributes to access. The student should set these attributes either manually through the CLI tool or automatically with an attributes file provided for the coursework submission (parsed by the CLI tool). After encryption they should be able to login to the resource server and upload their encrypted file in binary format.

#### Considerations:

- student should be able to decrypt their own submission

- staff/markers must be able to decrypt submission for marking
- only the encrypted file should be uploaded
- during encryption metadata should be generated from the attributes and attached to the binary file
- upload should not be possible without an active account
- student should be enrolled in WebSci before uploading submission

## Student - Level 3 - CompSci [Class Rep]

### **Attempting to browse and then download minutes from a class rep meeting.**

Student attended (or missed - we don't care) the class rep meeting but would like to find and download the official minutes from the meeting. There may be many minutes for class rep meetings available, and the student isn't necessarily sure if the latest meeting's minutes are uploaded yet. As such they need to browse all available minutes to find the latest uploaded. Only current class reps should have access to the minutes and other students should not even be able to see the minutes on the server. After finding the latest minutes available, the student's Key should be used with a CLI tool to decrypt the minutes for the student to view them.

#### Considerations:

- student must have an active account
- only class reps and staff should be able to download/decrypt the minutes
- there may be multiple versions of the minutes (classified/public)
- being a past class rep is not valid, only current
- minutes should only be available for class reps that were "in office" during a period where said minutes were created or dated

## Student - Level 4 - CompSci [Demonstrator - 1P]

### **Attempting to browse and then download solution & lab for 1P course.**

Student is a Demonstrator and thus also a Staff member. Normally they would not have access to a Level 1 course anymore, but would like to browse available 1P labs and solutions. On finding correct files for the week, the student would like to download both files before using their Key to decrypt the lab sheet & solutions with a CLI tool.

#### Considerations:

- student must have an active account
- only staff (incl. Demonstrator) should have access to solutions
- only staff and students enrolled in 1P should have access to the lab
- but a student that is a Demonstrator must be a 1P Demonstrator not 1CT
- must be a current Demonstrator not future or past

- solutions & lab only available if current or previous week

## Lecturer - IDA - IR - Joemon Jose

### **Attempting to upload lecture slides for Web Science lecture.**

Lecturer wants to upload lecture slides in advance of lecture - inline with University policy. The slides should only be available to students from 24 hours before the lecture and onwards. The lecturer needs to be able to encrypt the file with their Key locally using a CLI tool and a set of attributes. They may either set the attributes manually through the CLI or perhaps from an imported attributes file. After encryption the lecturer would upload the binary file to the server. They may upload the file at any point before the lecture, however the file should be locked to staff (perhaps IDA staff) only until 24 hours prior to lecture.

#### Considerations:

- lecturer must be an active lecturer of websci course
- must have lecturer role not just title
- staff should be able to access from moment of upload
- may be limited to staff section
- a student should only have access if <24 hours before lecture
- a student must be enrolled in the course
- only the encrypted file should be uploaded
- during encryption metadata should be generated from the attributes and attached to the binary file

## Lecturer - GLASS - SE - Tim Storer

### **Attempting to upload Level 3 project proposals.**

Lecturer/Projects Coordinator wants to upload the latest list of project proposals. This is in advance of the release of the proposals and as such should not be available to students, but rather staff-only with some external access (scope???) for proposal contacts to check their proposals are correct. After proposal release, all Level 3 students should have access to all proposals to aide in selecting their preferred project. The files should all be encrypted locally with the lecturer's Key using a CLI tool that embeds relevant metadata into the binary files.

#### Considerations:

- lecturer must be the head lecturer (project coordinator) of TP3
- must have lecturer role not just title
- staff should be able to access from moment of upload
- may also need external access for the 'customer' to review
- a student should only have access proposals have been released

- a student must be enrolled in Level 3
- only the encrypted files should be uploaded
- during encryption metadata should be generated from the attributes and attached to each binary files

Staff - Head of School - Chris Johnson

**Attempting to upload minutes from Senior Staff meeting.**

After Senior Staff meetings the minutes are written up and then uploaded by the Head of School. Minutes should only be available to Senior Staff members such as Readers and above. An alternative School Update could be prepared and distributed to ALL staff members, but would not contain the same contents as the Senior Staff meeting minutes. The Head of School would encrypt the minutes with their own Key and define certain attributes using the CLI tool - perhaps by importing an attributes file. The CLI tool would assign these attributes as metadata to the binary file as well before uploading to the server.

Considerations:

- staff must be an active staff member
- staff must be the Head of School
- senior staff should be able to access the file after upload
- senior staff would Readers and up
- no students would be able to see or decrypt the file
- only the encrypted files should be uploaded
- during encryption metadata should be generated from the attributes and attached to each binary files