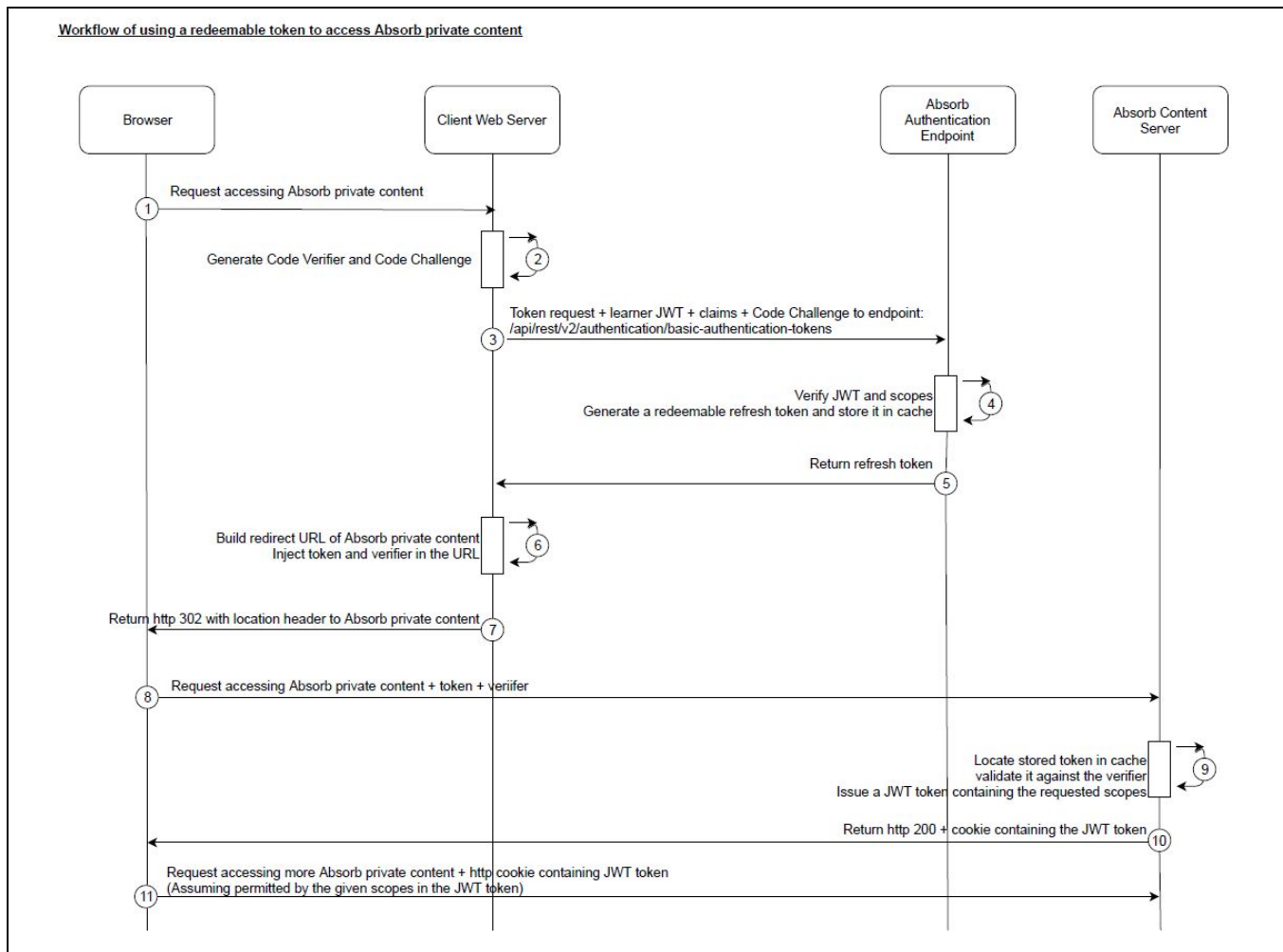


Absorb Infuse - How to access Absorb private content using a redeemable token

Requirements

- The content of the course is hosted in Absorb private directory.
- The learner is enrolled to that course.
- A web server capable of:
 - Authenticating users and obtaining JWT access token which is capable of making Absorb REST API request. For more details of authenticating learners using SAML SSO, see this document: [Absorb Infuse - How to use SAML to obtain an authentication token for a learner](#)
 - Obtaining course Id and URL to Absorb private content. For more details, see this document: [Absorb Infuse - How to retrieve Online Course/Chapter/Lesson details](#)
 - Redirecting users to Absorb with HTTP GET.
 - Storing session (token) information about the user between requests.
 - Performing HMACSHA256 hashing.

How it works



1. Request accessing private content hosted in Absorb via a URL.

```
https://{your web app}/content?courseId={course Id}
```

2. Generate code verifier and code challenge.

```
Code verifier: Random URL-safe string with a minimum length of 32 characters.
Code challenge: HMACSHA256 hash formatted in Hexadecimal of the code verifier.
For example:
{
  "codeVerifier": "j7u8CgbYfG29t3YDa97jkMFCFmQ_CZe32QEgDcHN-41",
  "codeChallenge": "06454f6dc461b66c22297a1f8c63c3db9a97b211cd8c7ddb4481dad0073322f7"
}
```

3. Send request to Absorb endpoint to obtain a redeemable token.

```
POST /api/rest/v2/authentication/basic-authentication-tokens HTTP/1.1
Host: {your Absorb route}
Authorization: Bearer {the JWT access token of the learner}
Content-Type: application/json
{
  "challenge": "{code challenge}",
  "accessMode": "API",
  "claims": [ {"Key": "Learner.Enrollment", "Value": "{course id}"} ]
}
```

4. Absorb authentication endpoint verifies the JWT token and the course Id, generates a redeemable token.
5. The token is returned from Absorb authentication endpoint.
6. The client web server injects token and code verifier into the URL to Absorb private content.

```
https://{your Absorb route}/Files/Private/{file path}?refreshToken={token returned from previous step}
&verifier={code verifier}
```

7. The client web server returns HTTP 302 with the URL.
8. Browser request accessing Absorb private content providing token and code verifier in the URL.
9. Absorb content server verifies the token using the code challenge against the code verifier.
10. Private content is returned and a cookie containing JWT token which is capable of accessing private content defined in the claims.
11. The browser can access all private content of the enrolled course.

Note: there is no need to inject token and verifier in the URL once a cookie is obtained. Until accessing to a different course is needed, then repeat the above workflow or request claims for multiple courses in step 3.

Accessing private course content via Absorb course player

The workflow mostly is identical except in step 6 to use URL that points to Absorb course player.

```
https://{your Absorb route}/learn/courseplayer?courseId={course Id}&lessonId={lesson Id}&refreshToken={token}
&verifier={code verifier}&returnUrl={your client return URL}
```