

Integration test cases

Version 1.2

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# Test case 1: Find request - ISP will register a resource with consent and authorisation when there is a full match

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| **Functional area** | **Prerequisites** | **Test data** |
| Find request: Receive a find request, register match and return view data for that match. | Data provider tester has set up integrated service provider (ISP) pension data and matching criteria for 'Full Match' against attributes in find request user\_token for Juliet Romeo. | Test IDP and test dashboard have user token data for user.  National Insurance number is added to the test dashboard user information page. |

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| **Test steps** | **Expected results** |
| 1. Log in as user into dashboard. | 1.The user in consent and authorisation has a resource registered. |
| 2. Use the find process in the test dashboard to trigger the find request to the ISP under test. | 2. The test dashboard displays a pension data jwt that is schema compliant and is for a full match. |
| 3. Check the consent and authorisation resources for the test user. | 3. The acknowledgement 202 for the find request. |
| 4. Verify the dashboard displays a pension data jwt that is schema compliant and is for a full match. |  |

# Test case 2: Find request - ISP does not register a resource with consent and authorisation when there is no match

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| **Functional area** | **Prerequisites** | **Test data** |
| Find request: Receive a find request. | Data provider tester has set up ISP pension data and matching criteria for 'No Match' against attributes in find request user\_token for Kiera Satin. | Test IDP and test dashboard have user token data for user.  National Insurance number is added to the test dashboard user information page. |

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| **Test steps** | **Expected results** |
| 1. Log in as user into dashboard. | 1. After a specific time, the user in consent and authorisation still has no resources registered. |
| 2. Use the find process in the test dashboard to trigger the find request to the ISP under test. |  |
| 3. Check the consent and authorisation resources for the test user. |  |

# Test case 3: Find request- The ISP will send an update resource request to consent and authorisation when a find request matches the same user with a possible match as a full match

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| **Functional area** | **Prerequisites** | **Test data** |
| Find request: Update a possible match to full match. | Data provider tester has set up ISP pension data and matching criteria for attributes in find request user token for Mary Hendrix:   * 'Possible Match' when National Insurance number is not present in user token. * ‘Full Match' when National Insurance number is defined in user token. | Test IDP and test dashboard have user token data for user.  National Insurance number is added to the test dashboard user information page on the second find attempt. |

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| **Test steps** | **Expected results** |
| 1. Log in as user into dashboard. | 1.The user in consent and authorisation has one resource registered after the first find. |
| 2. Use the find process (do not add National Insurance number) in the test dashboard to trigger the find request to the ISP under test. | 2. The test dashboard displays a pension data jwt that is schema compliant and is for a possible match after the first find. |
| 3. Check the consent and authorisation resources for the test user. | 3. The user in consent and authorisation has one resource registered after the second find. |
| 4. Verify the dashboard displays a pension data jwt that is schema compliant and is for a possible match. | 4. The test dashboard displays a pension data jwt that is schema compliant and is for a full match after the second find. |
| 5. Use the find process (add National Insurance number) in the test dashboard to trigger the find request to the ISP under test. | 5. The consent and authorisation log shows an update resource request. |
| 6. Check the consent and authorisation resources for the test user. |  |
| 7. Verify the dashboard displays a pension data jwt that is schema compliant and is for a full match. |  |
| 8. Check the consent and authorisation logs. |  |

# Test case 4: Verify ISP find endpoint has implemented MTLS (no certificate)

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| **Functional area** | **Prerequisites** | **Test data** |
| Find endpoint: mTLS. | ISP find endpoint has the relevant certificate for pre-production pension finder service (PFS).  Data provider tester has set up ISP pension data and matching criteria for 'Full Match' against attributes in find request user\_token.  Note: This test is not required in data provider system testing. | Find request with valid:   * find\_correlation\_id * X-Request-ID header * user\_account\_token * user\_token with attributes for full match   The request must be sent without the correct PFS certificate. |

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| **Test steps** | **Expected results** |
| 1. Send the find request to the ISP under test without the PFS certificate. Note that this find request will come directly from the test suite, as PFS will have the required certificate. | 1. Resource Server responds to the View Request with status code 400 or 403 or rejects the ssl handshake. |
| 2. Check the consent and authorisation resources for the test user. |  |

# Test case 5: Verify ISP find endpoint has implemented MTLS (wrong certificate)

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| **Functional area** | **Prerequisites** | **Test data** |
| Find endpoint: mTLS | ISP find endpoint has the relevant certificate for pre-production PFS.  Data provider tester has set up ISP pension data and matching criteria for 'Full Match' against attributes in find request user\_token.  Note: this test is not required in data provider system testing. | Find request with valid:   * find\_correlation\_id * X-Request-ID header * user\_account\_token * user\_token with attributes for full match   The request must be sent without the correct PFS certificate. |

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| **Test steps** | **Expected results** |
| 1. Send the find request to the ISP under test with an invalid certificate. Note that this find request will come directly from the test suite, as PFS will have the required certificate. | 1. Resource Server responds to the View Request with status code 400 or 403 or rejects the ssl handshake. |
| 2. Check the consent and authorisation resources for the test user. |  |

# Test case 6: When the same pension has possible matches for more than one user, the ISP will register both possible matches.

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| **Functional area** | **Prerequisites** | **Test data** |
| Find request: Same pension can match more than one user. | Data provider tester has set up ISP pension data and matching criteria for 'Possible Match' against attributes in find request user\_tokens for both Brynn Elkan and Billy Elkan. | Test IDP and test dashboard have user token data for users.  National Insurance number is added to the test dashboard user information page |

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| **Test steps** | **Expected results** |
| 1. Log in as first user into test dashboard. | 1. The first user in consent and authorisation has one resource registered after the first find. |
| 2. Use the find process in the test dashboard to trigger the find request to the ISP under test. | 2. The test dashboard displays a pension data jwt that is schema compliant and is for a possible match after the first find. |
| 3. Check the consent and authorisation resources for the first user. | 3. The second user in consent and authorisation has one resource registered after the second find. |
| 4. Verify the dashboard displays a pension data jwt that is schema compliant and is for a possible match. | 4. The test dashboard displays a pension data jwt that is schema compliant and is for a possible match after the second find. |
| 5. Log in as second user into test dashboard. | 5. If the resource server under tests has supplied possible match references, these must be different. |
| 6. Use the find process in the test dashboard to trigger the find request to the ISP under test. | 6. The pension identifier (PeI) must be different for each user. |
| 7. Check the consent and authorisation resources for the first user. |  |
| 8. Verify the dashboard displays a pension data jwt that is schema compliant and is for a possible match. |  |

# Test case 7: When the same pension has full matches for more than one user, the ISP will register both full matches. This can happen when a person has more than one IDP account

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| **Functional area** | **Prerequisites** | **Test data** |
| Find request: Same pension can match more than one user. | Data provider tester has set up ISP pension data and matching criteria for 'Full Match' against attributes in find request user\_tokens for both accounts for Elmo Fire. The only difference between the 2 user tokens is the email. | Test IDP and test dashboard have user token data for users.  National Insurance number is added to the test dashboard user information page. |

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| **Test steps** | **Expected results** |
| 1. Log in as first user into test dashboard. | 1. The first user in consent and authorisation has one resource registered after the first find. |
| 2. Use the find process in the test dashboard to trigger the find request to the ISP under test. | 2. The test dashboard displays a pension data jwt that is schema compliant and is for a full match after the first find. |
| 3. Check the consent and authorisation resources for the first user. | 3. The second user in consent and authorisation has one resource registered after the second find. |
| 4. Verify the dashboard displays a pension data jwt that is schema compliant and is for a full match. | 4. The test dashboard displays a pension data jwt that is schema compliant and is for a full match after the second find. |
| 5. Log in as second user into test dashboard. | 5. The PeI must be different for each user. |
| 6. Use the find process in the test dashboard to trigger the find request to the ISP under test. |  |
| 7. Check the consent and authorisation resources for the second user. |  |
| 8. Verify the dashboard displays a pension data jwt that is schema compliant and is for a full match. |  |

# Test case 8: Find request- The ISP will register all matches for a user

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| **Functional area** | **Prerequisites** | **Test data** |
| Find request: More than one matches for a user. | Data provider tester has set up ISP pension data and matching criteria for 2 pensions matching (one full and one possible) against attributes in find request user\_token for Eleanor Rigby. | Test IDP and test dashboard have user token data for user.  National Insurance number is added to the test dashboard user information page. |

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| **Test steps** | **Expected results** |
| 1. Log in as user into dashboard. | 1. The dashboard displays the two pension data jwts for the same user. |
| 2. Use the find process in the test dashboard to trigger the find request to the ISP under test. | 2. One of the pensions is schema compliant for a full match. |
| 3. Check the consent and authorisation resources for the test user. | 3. The other pension is schema compliant for a possible match. |
| 4. Verify the dashboard displays two pension data jwt that is schema compliant and is for a full match. |  |

# Test case 9: Verify ISP view endpoint has implemented MTLS and will reject a request without a certificate

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| **Functional area** | **Prerequisites** | **Test data** |
| Process a view request. | ISP view endpoint has the relevant certificate for pre-production pension finder service.  ISP has full match registered with consent and authorisation.  Note: this test is not required in data provider system testing. | Pension associated with full match has data for view response payload. |

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| **Test steps** | **Expected results** |
| 1. Create view request using the view endpoint for the resource server under test and the resource registered in test case 1. | 1. Resource Server responds to the View Request with status code 400 or 403 or rejects the ssl handshake. |
| 2. Send the view request without a certificate. | 2. The view response payload does not contain any pension data. |

# Test case 10: Verify ISP view endpoint has implemented MTLS and will reject a request with the wrong certificate

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| **Functional area** | **Prerequisites** | **Test data** |
| Process a view request. | ISP view endpoint has the relevant certificate for pre-production pension finder service.  ISP has full match registered with consent and authorisation.  Note: this test is not required in data provider system testing. | Pension associated with full match has data for view response payload. |

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| **Test steps** | **Expected results** |
| 1. Create view request using the view endpoint for the resource server under test and the resource registered in test case 1. | 1. Resource Server responds to the View Request with status code 400 or 403 or rejects the ssl handshake. |
| 2. Send the view request with the wrong certificate. | 2. The view response payload does not contain any pension data. |

# Test case 11: The ISP must return a permission ticket when a view request has no RPT

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| **Functional area** | **Prerequisites** | **Test data** |
| Process a view request. | ISP has full match registered with consent and authorisation. This will happen in the test cases run prior to this test case. | Pension associated with full match has data for view response payload. |

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| **Test steps** | **Expected results** |
| This is tested implicitly by the test dashboard as its initial view request does not have an RPT. | 1. ISP responds to the view request with status code 401. |
| Test explicitly by examining test dashboard logs. | 2. The view response payload does not contain any pension data. |
|  | 3. The view response contains a WWW-Authenticate header which will include the following parameters:   * ticket: a permission ticket retrieved from consent and authorisation * as\_uri: the url of the authorization server * realm: always "PensionDashboard" |

# Test case 12: The data provider must update the match status after pension owner interaction has determined possible match is full match

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| **Functional area** | **Prerequisites** | **Test data** |
| Update match status after discussion with user confirms ownership. | Data provider tester has set up ISP pension data and matching criteria for 'Possible Match' against attributes in find request user\_token for Yun Paletta. | Test IDP and test dashboard have user token data for user.  National Insurance number is added to the test dashboard user information page. |

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| **Test steps** | **Expected results** |
| 1. Log in as user into test dashboard. | 1. The user in consent and authorisation has one resource registered after the find process. |
| 2. Use the find process in the test dashboard to trigger the find request to the ISP under test. | 2. The test dashboard displays a pension data jwt that is schema compliant and is for a possible match after the find process. |
| 3. Check the consent and authorisation resources for the user. | 3. The user in consent and authorisation still has one resource registered after the update process. |
| 4. Verify the dashboard displays a pension data jwt that is schema compliant and is for a possible match. | 4. The test dashboard displays a pension data jwt that is schema compliant and is for a full match after the update process. |
| 5. Inform the Resource Server tester that they must update the match for this user to a full match. | 5. The consent and authorisation logs show an update resource request. |
| 6. Log in as same user into test dashboard. |  |
| 6. Use the view process in the test dashboard to get the pension data. |  |
| 7. Check the consent and authorisation resources for the same user. |  |
| 8. Verify the dashboard displays a single pension data jwt that is schema compliant and is for a full match. |  |

# Test case 13: The data provider must delete a possible match after pension owner interaction has determined possible match is not a match

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| **Functional area** | **Prerequisites** | **Test data** |
| Delete a resource. | Data provider tester has set up ISP pension data and matching criteria for 'Possible Match' against attributes in find request user\_token for Stevie Stifflemire. | Test IDP and test dashboard have user token data for user.  National Insurance number is added to the test dashboard user information page. |

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| **Test steps** | **Expected results** |
| 1. Log in as user into test dashboard. | 1. The user in consent and authorisation has one resource registered after the find process. |
| 2. Use the find process in the test dashboard to trigger the find request to the ISP under test. | 2. The test dashboard displays a pension data jwt that is schema compliant and is for a possible match after the find process. |
| 3. Check the consent and authorisation resources for the user. | 3. The user in consent and authorisation has no resources registered after the delete process. |
| 4. Verify the dashboard displays a pension data jwt that is schema compliant and is for a possible match. | 4. The consent and authorisation logs show the delete reason is 'match-no'. |
| 5. Inform the Resource Server tester that they must delete the match for this user with reason 'match-no'. |  |
| 6. Check the consent and authorisation resources for the user. |  |
| 7. Check the consent and authorisation logs. |  |

# Test case 14: The data provider must delete a possible match after the expiry time for the resource has elapsed

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| **Functional area** | **Prerequisites** | **Test data** |
| Delete a resource. | Data provider tester has set up ISP pension data and matching criteria for 'Possible Match' against attributes in find request user\_token for Wendell Rubano. | Find request with valid:   * find\_correlation\_id * X-Request-ID header * user\_account\_token * user\_token with attributes for possible match |

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| **Test steps** | **Expected results** |
| 1. Log in as user into test dashboard. | 1. The user in consent and authorisation has one resource registered after the find process. |
| 2. Use the find process in the test dashboard to trigger the find request to the ISP under test. | 2. The test dashboard displays a pension data jwt that is schema compliant and is for a possible match after the find process. |
| 3. Check the consent and authorisation resources for the user. | 3. The user in consent and authorisation has no resources registered after the delete process. |
| 4. Verify the dashboard displays a pension data jwt that is schema compliant and is for a possible match. | 4. Consent and authorisation logs show that delete reason was 'match-timeout'. |
| 5. Inform the Resource Server tester that they must delete the match for this user with reason 'match-timeout'. |  |
| 6. Check the consent and authorisation resources for the user. |  |
| 7. Check the consent and authorisation logs. |  |

# Test case 15: The data provider must delete a 'Full' match after pension owner interaction has determined it is not a match

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| **Functional area** | **Prerequisites** | **Test data** |
| Delete a resource. | Data provider tester has set up ISP pension data and matching criteria for 'Full Match' against attributes in find request user\_token for Kiera Bassil. | Find request with valid:   * find\_correlation\_id * X-Request-ID header * user\_account\_token * user\_token with attributes for full match |

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| **Test steps** | **Expected results** |
| 1. Log in as user into test dashboard. | 1. The user in consent and authorisation has one resource registered after the find process. |
| 2. Use the find process in the test dashboard to trigger the find request to the ISP under test. | 2. The test dashboard displays a pension data jwt that is schema compliant and is for a full match after the find process. |
| 3. Check the consent and authorisation resources for the user. | 3. The user in consent and authorisation has no resources registered after the delete process. |
| 4. Verify the dashboard displays a pension data jwt that is schema compliant and is for a possible match. | 4. Consent and authorisation logs show that delete reason was 'match-withdrawn'. |
| 5. Inform the Resource Server tester that they must delete the match for this user with reason 'match-withdrawn'. |  |
| 6. Check the consent and authorisation resources for the user. |  |
| 7. Check the consent and authorisation logs. |  |

# Test case 16: The data provider must delete a 'Full' match after the corresponding pension has been removed, for example, benefit crystalised or transfer out

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| **Functional area** | **Prerequisites** | **Test data** |
| Delete a resource. | Data provider tester has set up ISP pension data and matching criteria for 'Full Match' against attributes in find request user\_token for Roland Granite. | Find request with valid:   * find\_correlation\_id * X-Request-ID header * user\_account\_token * user\_token with attributes for full match |

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| **Test steps** | **Expected results** |
| 1. Log in as user into test dashboard. | 1. The user in consent and authorisation has one resource registered after the find process. |
| 2. Use the find process in the test dashboard to trigger the find request to the ISP under test. | 2. The test dashboard displays a pension data jwt that is schema compliant and is for a full match after the find process. |
| 3. Check the consent and authorisation resources for the user. | 3. The user in consent and authorisation has no resources registered after the delete process. |
| 4. Verify the dashboard displays a pension data jwt that is schema compliant and is for a full match. | 4. Consent and authorisation logs show that delete reason was 'asset-removed'. |
| 5. Inform the Resource Server tester that they must delete the match for this user with reason 'asset-removed'. |  |
| 6. Check the consent and authorisation resources for the user. |  |
| 7. Check the consent and authorisation logs. |  |