



D1.3 Validation & Evaluation Plan v1

WP1 – Wildlife scenarios

Deliverable Lead: CLS

Dissemination Level: Public

Deliverable due date: 31/08/2016

Actual submission date: 29/07/2016

Version 1.2



| Document Control Page | |
|-----------------------|--|
| Title | D1.3 Validation & Evaluation Plan v1 |
| Creator | CLS |
| Description | This document presents the integration and test plan of the application. It covers the validation of the whole system according to the scenarios described in D1.1 Use case scenarios V1 |
| Publisher | EO4wildlife Consortium |
| Contributors | E Lambert, JM Zigna |
| Creation date | 20/06/2016 |
| Type | Text |
| Language | en-GB |
| Rights | copyright "EO4wildlife Consortium" |
| Audience | <input checked="" type="checkbox"/> Public <input type="checkbox"/> Confidential <input type="checkbox"/> Classified |
| Status | <input type="checkbox"/> In Progress <input type="checkbox"/> For Review <input type="checkbox"/> For Approval <input checked="" type="checkbox"/> Approved |

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Table of Contents

| | |
|---|----|
| EO4wildlife Project Overview | 4 |
| Executive Summary | 5 |
| 1. Strategy and resources..... | 6 |
| 1.1 Test strategy | 6 |
| 1.2 Validation organization..... | 6 |
| 1.3 Resources..... | 7 |
| 1.3.1 Hardware Resources | 7 |
| 1.3.2 Software Resources | 7 |
| 1.3.3 Data..... | 8 |
| 2 Test cases | 9 |
| 2.1 Test case families..... | 9 |
| 2.2 Test case list..... | 9 |
| 2.2.1 General..... | 9 |
| 2.2.2 Administration | 9 |
| 2.2.3 Product..... | 10 |
| 2.2.4 Service..... | 10 |
| 2.2.5 Tools..... | 10 |
| 3 Test cases description | 11 |
| 3.1 Test Suite: General | 11 |
| 3.2 Test Suite: Administration | 14 |
| 3.2.1 Test Suite: Management of users | 14 |
| 3.2.2 Test Suite: Validation of product or service metadata | 17 |
| 3.2.3 Test Suite: Test of service | 21 |
| 3.3 Test Suite: Integration of products and services | 23 |
| 3.3.1 Test Suite: Description of a product | 23 |
| 3.3.2 Test Suite: Description of a service | 29 |
| 3.3.3 Test Suite: Upload of a service | 33 |
| 3.4 Test Suite: Discovery, service run and display | 35 |
| 3.4.1 Test Suite: Discover a product | 35 |
| 3.4.2 Test Suite: Discover a service..... | 38 |
| 3.4.3 Test Suite: Run Service..... | 41 |
| 3.4.4 Test Suite: Display and on-line tools..... | 48 |
| 4 Conclusion | 64 |
| References..... | 65 |
| Annex 1: Traceability matrix..... | 66 |

List of Tables

| | |
|--|----|
| Table 1: Strategy for test cases | 6 |
| Table 2: Validation Organization | 7 |
| Table 3: Test case General List | 9 |
| Table 4: Test case Administration List..... | 10 |
| Table 5: Test case Product List | 10 |
| Table 6: Test case Service List | 10 |
| Table 7: Test case Tools List | 10 |

EO4wildlife Project Overview

EO4wildlife main objective is to bring large number of multidisciplinary scientists such as biologists, ecologists and ornithologists around the world to collaborate closely together while using European Sentinel Copernicus Earth Observation more heavily and efficiently.

In order to reach such important objective, an open service platform and interoperable toolbox will be designed and developed. It will offer high level services that can be accessed by scientists to perform their respective research. The platform front end will be easy-to-use, access and offer dedicated services that will enable them process their geospatial environmental stimulations using Sentinel Earth Observation data that are intelligently combined with other observation sources.

Specifically, the EO4wildlife platform will enable the integration of Sentinel data, ARGOS archive databases and real time thematic databank portals, including Wildlifetracking.org, Seabirdtracking.org, and other Earth Observation and MetOcean databases; locally or remotely, and simultaneously.

EO4wildlife research specialises in the intelligent management big data, processing, advanced analytics and a Knowledge Base for wildlife migratory behaviour and trends forecast. The research will lead to the development of web-enabled open services using OGC standards for sensor observation and measurements and data processing of heterogeneous geospatial observation data and uncertainties.

EO4wildlife will design, implement and validate various scenarios based on real operational use case requirements in the field of wildlife migrations, habitats and behaviour. These include:

- Management tools for regulatory authorities to achieve real-time advanced decision-making on the protection of protect seabird species;
- Enhancing scientific knowledge of pelagic fish migrations routes, reproduction and feeding behaviours for better species management; and
- Setting up tools to assist marine protected areas and management.

Abbreviations and Glossary

A common glossary of terms for all EO4wildlife deliverables, as well as a list of abbreviations, can be found in the public document “EO4wildlife Glossary” available at EO4wildlife.eu.

Executive Summary

This document presents the integration and test plan of the application EO4wildlife.

It covers the validation of the whole system according to the scenarios described in D1.1 Use Case scenarios v1 [1].

It contains the following chapters except this one:

- **Chapter 1:** Strategy and resources presents the global strategy of the validation phase, the organization to be set up, the material and software resources necessary for their realization
- **Chapter 2:** Test cases section lists all the tests and their description structured in family.
- **Chapter 3:** Test cases description deals with links to test description introduced in chapter 3. Each test is detailed in a test sheet.

This test plan is the reference to build a test campaign to approve EO4wildlife developments. It is not a test report which will be described in D1.7 Validation Test reports v1.

The testcases details will be updated according to the final implementation of the EO4wildlife web interface described in D2.1 System architecture and operational scenarios v1 [2]. This version focuses mainly in the functional coverage of the EO4wildlife scenarios. However, it can be a starting point for WP2 and WP3 validation teams.

1. Strategy and resources

1.1 Test strategy

The main purpose of the EO4wildlife system is to improve existing services, to create new ones and share them by facilitating the access of new technologies for the analysis of animal behaviours.

The functional modelling of the EO4wildlife system is decomposed in 3 main parts:

1. The integration of products and services into the EO4wildlife system:
 - The description of a product: that means the creation of the metadata product
 - The description of a service: that means the creation of the metadata service
 - The upload of a service in the EO4wildlife platform
2. The main functions of the platform concerning all users: discovery, service run and display:
 - Discover product : the search of a product in the catalogue of products
 - Discover service : the search of a service in the catalogue of services
 - Run Service : define and run of a service, or a set of services
 - Display and on-line tools: the display of products and service outputs
3. The administrative functions of the EO4wildlife system:
 - Validate or invalidate the product or service metadata
 - Test and uploaded service
 - Invalidate a service
 - Manage the users: create/modify/delete

The strategy is to start with the integration of products and services and the administrative functions of the EO4wildlife system. This preliminary step is required to initialize the system and then be able to run the discovery, display and run functionalities.

Test cases are crucial to the process because they identify and communicate the conditions that will be implemented in test and are necessary to verify successful and acceptable implementation of the product requirements. They are all about making sure that the product fulfils the requirements of the system. So generating the test cases automatically from use cases is an advantage for software testing.

Test cases are derived from use cases, described in the “D1.1 Use Case scenarios v1” document [1].

| Strategy for test cases | |
|-------------------------|--|
| Test purpose: | To verify if the use case selected meets good test target, including navigation, data entry, processing and recovery |
| Technical: | It must run each way for the use or function using valid data and invalid preselected while checking: The expected results with valid data (expected) The error and warning messages when invalid data is used |
| Completion Criteria: | All planned tests have been executed All identified anomalies were recorded |

Table 1: Strategy for test cases

1.2 Validation organization

Throughout the testing process, the various activities will be carried out by persons filling a specific role. In fact, each activity requires specific skills.

This section describes the most important roles. This gives an idea of the skills and profiles required to test adequately the application. It is possible that the same person have several roles.

| Persons | Responsibilities |
|-------------------------------|--|
| Project leader | Provide management coaching Responsibilities : Provide leadership Recruit the appropriate resources Manage reports, meetings ... |
| Manager / Technical Architect | Responsible for the qualification and the technical architecture Responsibilities: <ul style="list-style-type: none"> • Analyze the impact of new solutions in the information system • Develop and validate the technical architecture of the information system • Administering the System and Database • Ensuring the reliability, performance and system evolution • Support to business experts • Manage technical team |
| Tester | Test and validation Responsibilities : Test and validation Report results Record anomalies |
| Developer | Development, test and validation Responsibilities: Development of the functionality Respect good practice coding Unit test Correction of anomalies |

Table 2: Validation Organization

1.3 Resources

1.3.1 Hardware Resources

The EO4wildlife platform should be available for tests. A test environment is used to validate a service before its publication in the operational environment. A specific run in the operational environment is done when services are exposed to end-users.

1.3.2 Software Resources

Services should be deployed on the EO4wildlife to test the EO4wildlife web interface and the services themselves.

All the components of the EO4wildlife platform should be up and running.

Tests accounts for all profiles should be declared to validate the services/functionality.

The test campaign is monitored thanks to the Testlink open tool, <http://testlink.org>. CLS has created a dedicated project for the EO4wildlife validation in the CLS Testlink instance, <http://testlink-ext.cls.fr/testlink/login.php>. The access is granted on request to CLS project manager.

1.3.3 Data

The ARGOS products and auxiliary data required by the EO4wildlife scenarios are already operational and will be used thanks to their current direct access.

2 Test cases

2.1 Test case families

Following the functional modelling of the system, as described in chapter 1 Strategy and resources, tests considered in this document are decomposed into families as follows:

- Administration
- Product
- Service
- Tools

The nomenclature chosen for the test case is based on this decomposition.

The tests have the following nomenclature: EO4-mmm-xxx-Label

- mmm: Family of the test. If the context is general to the system, we indicate: GEN
- xxx: Number in 3 figures. For the numbering of the essays: begin in 010, then number in 10s to allow inserting tests afterward.

Example: EO4-Product-050-Discover a product

EO4-Service-020-Modification of the service metadata.

2.2 Test case list

The list of test cases is listed here below and a requirements coverage id provided in Annex 1: Traceability matrix

2.2.1 General

| Identifier | Label |
|-------------|--------------------------------------|
| EO4-GEN-010 | Connection to the EO4wildlife system |
| EO4-GEN-020 | Access authorization |
| EO4-GEN-030 | Platform data management |

Table 3: Test case General List

2.2.2 Administration

| Identifier | Label |
|------------------------|---------------------------------|
| EO4-Administration-010 | Create a user |
| EO4-Administration-020 | Modify the attributes of a user |
| EO4-Administration-030 | Delete a user |
| EO4-Administration-040 | Validate a metadata product |
| EO4-Administration-050 | Validate a service metadata |
| EO4-Administration-060 | Invalidate a metadata product |
| EO4-Administration-070 | Invalidate a service metadata |
| EO4-Administration-080 | Test the uploaded service |
| EO4-Administration-090 | Invalidate a service |

Table 4: Test case Administration List**2.2.3 Product**

| Identifier | Label |
|-----------------|---|
| EO4-Product-010 | Creation of the metadata product from scratch |
| EO4-Product-020 | Creation of the metadata product from an existing catalogue |
| EO4-Product-030 | Modification of the metadata product |
| EO4-Product-040 | Delete of the metadata product |
| EO4-Product-050 | Discover a product |
| EO4-Product-060 | Extract a product |

Table 5: Test case Product List**2.2.4 Service**

| Identifier | Label |
|-----------------|--------------------------------------|
| EO4-Service-010 | Creation of a service metadata |
| EO4-Service-020 | Modification of the service metadata |
| EO4-Service-030 | Delete of the service metadata |
| EO4-Service-040 | Upload a service |
| EO4-Service-050 | Delete a service |
| EO4-Service-060 | Discover a service |
| EO4-Service-070 | Save a service |
| EO4-Service-080 | Connection from a thematic platform |
| EO4-Service-090 | Save a new service without errors |
| EO4-Service-100 | Save a new service with errors |
| EO4-Service-110 | Run a service |
| EO4-Service-120 | Reuse a workflow definition |

Table 6: Test case Service List**2.2.5 Tools**

| Identifier | Label |
|---------------|-----------------------------|
| EO4-Tools-010 | Visualization |
| EO4-Tools-020 | Colour map |
| EO4-Tools-030 | Adjust the min-max value |
| EO4-Tools-040 | Linear or logarithmic scale |
| EO4-Tools-050 | Transparency level |
| EO4-Tools-060 | Location |
| EO4-Tools-070 | Draw in 3D |
| EO4-Tools-080 | Draw in 2D |
| EO4-Tools-090 | Define a mask |
| EO4-Tools-100 | Track of an animal |
| EO4-Tools-110 | Elliptic error |
| EO4-Tools-120 | Extraction of the data |
| EO4-Tools-130 | Generate a report |
| EO4-Tools-140 | Generic tools |
| EO4-Tools-150 | Thematic tools |

Table 7: Test case Tools List

3 Test cases description

3.1 Test Suite: General

| Test Case EO4WF-1: EO4-GEN-010-Connection to the EO4wildlife system [Version : 1] | | |
|---|---|---|
| Summary: This test case describes how to connect to the EO4wildlife system | | |
| Preconditions: Any user | | |
| #: | Step actions: | Expected Results: |
| 1 | Load the URL of EO4wildlife application Enter the user credentials, but with an incorrect password | The user is not logged to the application |
| 2 | Enter the good user credentials | The user is connected to the application Top of the banner on the right, it appears the user credentials |
| 3 | Click on Disconnect (sign out) | The user is disconnected from the application |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-GEN-0010/T: Connection | |

Test Case EO4WF-2: EO4-GEN-020-Access authorization [Version : 1]

Summary:

This test case describes the different access authorization for the profiles: user, product provider, service provider and administrator. An account can also have several profiles. Each profile will be tested first before any combination.

- an account with the profile "administrator", which can access to all functionalities
- an account with the profile "product provider", which has access to the user rights, plus specific rights for product provider
- an account with the profile "service provider", has access to the user rights, plus specific rights for service provider
- an account combining the product provider" and the "service provider" profiles
- an account with the "user" profile, which can discover product and services, and run services.

Preconditions:

Get the user credentials for each profiles

| #: | Step actions: | Expected Results: |
|---------------------------------|--|---|
| 1 | Connect to the application with a user profile | The user has access only to the following functions : - Discover product - Discover service - Run service - Display and on-line tools |
| 2 | Connect to the application with a product provider profile | The product provider has access only to the following functions : - Discover product - Discover service - Run service - Display and on-line tools - Describe product |
| 3 | Connect to the application with a service provider profile | The service provider has access only to the following functions : - Discover product - Discover service - Run service - Display and on-line tools - Describe service - Upload service |
| 4 | Connect to the application with an administrator profile | The administrator has access to all functions : - Discover product - Discover service - Run service - Display and on-line tools - Describe product - Describe service - Upload service - Validate product or service metadata - Invalidate product or service metadata - Test of the upload service - Invalidate a service - Manage the users |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-GEN-0020/T: User profiles | |

| Test Case EO4WF-49: EO4-GEN-030-Platform data management [Version : 1] | | |
|---|--|---|
| <u>Author:</u> | jzigna - 28/07/2016 08:37:45 | |
| <u>Summary:</u> | <p>This test describes the data management in the platform. Once products, auxiliary data and outputs are stored in the platform, they can be managed by a cache mechanism or not, and have a specific retention duration.</p> | |
| <u>#:</u> | <u>Step actions:</u> | <u>Expected Results:</u> |
| 1 | Management of data in cache: An auxiliary data is loaded in the cache during the processing of a service. | At the end of the retention period, the data is no more in the cache |
| 2 | Management of data on disk: An input product is stored in the private space of a user. | At the end of the retention period, the data is no more on the file system. |
| <u>Execution type:</u> | Manual | |
| <u>Estimated exec. duration (min):</u> | | |
| <u>Importance:</u> | Medium | |
| <u>Requirements</u> | None | |

3.2 Test Suite: Administration

3.2.1 Test Suite: Management of users

| Test Case EO4WF-3: EO4-Administration-010-Create a user [Version : 1] | | |
|--|---|--|
| <p>Summary: This test case describes how to create a user. A user has:</p> <ul style="list-style-type: none"> • An identifier and a name • An organization : company, or association • At least a profile : user or service provider or product provider or administrator • A unique login/password : The login doesn't contains illegal characters except of: ' - ' • An email address | | |
| <p>Preconditions: Connect with an administrator profile</p> | | |
| #: | Step actions: | Expected Results: |
| 1 | Connect to the application with an administrator profile Click on the function 'Manage the users' Click on Create a user | The following fields are displayed : an identifier, a name, an organization, a profile, a login and a password |
| 2 | Do not complete fields Validate | An error message is displayed The forget fields are marked in red |
| 3 | Complete the fields : Identifier, Name, Organization, Profile, email address For the login, complete with an invalid character | An error message is displayed The unique character authorized are: ' - ' |
| 4 | Complete the Login . Save the modifications | The user is created and the system initializes the password and sends it to the user by mail. |
| 5 | Connect with this user | The user is connected to the application |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-GEN-0040/T: Error message EO4-FCT-manUser-0480/T: Management of users | |

Test Case EO4WF-4: EO4-Administration-020-Modify the attributes of a user [Version : 1]
Summary:

The purpose of this test case is to show that it is possible to modify a user
All attributes can be modified

Preconditions:

Connect with an administrator profile

| #: | Step actions: | Expected Results: |
|---------------------------------|---|---|
| 1 | Connect to the application with an administrator profile Click on the function 'Manage the users' Select one user and modify all attributes | All attributes are updatable |
| 2 | Modify all fields Save the modifications | All modifications are saved |
| 3 | Modify the profile of the user by a product provider Save the modifications, and connect to the application with the modified user | The user has now the access granted of a product provider |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-GEN-0020/T:Userprofiles EO4-FCT-manUser-0480/T: Management of users | |

Test Case EO4WF-5: EO4-Administration-030-Delete a user [Version : 1]
Summary:

The purpose of this test case is to show that it is possible to delete a user :
- A delete confirmation request message is displayed

Preconditions:

Connect with an administrator profile

| #: | Step actions: | Expected Results: |
|---------------------------------|---|--|
| 1 | Connect to the application with an administrator profile Click on the function 'Manage the users' Select a user and click on delete | The system asks the administrator if he really wants to remove the user |
| 2 | Do not validate the message | The user is not deleted |
| 3 | Click again on delete Validate the message | The user is deleted |
| 4 | Connect to the application with this user | It is not possible to connect to the application because the user does not exist |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-manUser-0480/T: Management of users | |

3.2.2 Test Suite: Validation of product or service metadata

Test Case EO4WF-18: EO4-Administration-040-Validate a metadata product [Version : 1]

Summary:

The purpose of the test case is to describe how to validate a metadata product:

- The administrator has access to the content of the metadata
- The administrator check the use of shared vocabularies
- The state of the metadata product switch to 'validate' after validation
- After validation, the metadata is added to the catalogue and is available to any user
- The administrator can invalid a metadata for which the state turns to 'in progress'
- The administrator can validate a metadata which in state 'invalid'

Preconditions:

Connect as an administrator

Have in the database two metadata product in state 'to validate' : MP1 (NOT OK) and MP2 (OK)

Have in the database a metadata product in state 'invalid' : MP3

| #: | Step actions: | Expected Results: |
|---------------------------------|---|---|
| 1 | Connect to the application as an administrator Click on 'Manage metadata', and search the product in state 'to validate' | The system displays a list of metadata to validate |
| 2 | Click on the product metadata MP1 | The administrator has access to the content of the metadata |
| 3 | Check the use of shared vocabularies | The administrator ensures the coherence in the description of the metadata The content is NOT OK for the administrator |
| 4 | Do not validate the metadata | The metadata returns to the state 'in progress' |
| 5 | Search the metadata product MP2 | The administrator has access to the content of the metadata |
| 6 | The content is OK for the administrator Validate the metadata | The status of the metadata is 'validated' |
| 7 | Search the metadata MP3 which is in state 'invalid' The content is OK, and the administrator validate the metadata | The status of the metadata is 'validated' |
| 8 | Search the metadata MP2 and MP3 in the EO4wildlife catalogue | The metadatas are added to the catalogue automatically |
| 9 | Disconnect the administrator session Connect as an user Go to the product catalogue | The metadata MP2 and MP3 are available in the catalogue to any user |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-ValMeta-0440/T: Validation of product or service EO4-FCT-ValMeta-0450/T: Check the consistency of metadata | |

Test Case EO4WF-24: EO4-Administration-050-Validate a service metadata [Version : 1]
Summary:

The purpose of the test case is to describe how to validate a service metadata :

- The administrator has access to the content of the metadata
- The administrator checks the use of shared vocabularies
- The state of the service metadata switch to 'validated' after validation
- After validation, the metadata is added to the catalogue and is available to any user
- The administrator can invalid a metadata, which the state turns to 'in progress'
- The administrator can validate a metadata which in state 'invalid'

Preconditions:

Connect as an administrator

Have in the database two services metadata in state 'to validate' : SM1 (NOT OK) and SM2 (OK)

Have in the database a service metadata in state 'invalid' : SM3

| #: | Step actions: | Expected Results: |
|---------------------------------|--|--|
| 1 | Connect to the application as an administrator Click on 'Manage metadata', and search the service metadata in state 'to validate' | The system displays a list of metadata to validate |
| 2 | Click on the service metadata SM1 | The administrator has access to the content of the metadata |
| 3 | Check the use of shared vocabularies | The administrator insure the coherence in the description of the metadata The content is NOT OK for the administrator |
| 4 | Dont validate the metadata | The metadata returns to the state 'in progress' |
| 5 | Search the service metadata SM2 | The administrator has access to the content of the metadata |
| 6 | The content is OK for the administrator Validate the metadata | The status of the metadata is 'validated' |
| 7 | Search the metadata SM3 which is in state 'invalid' The content is OK, and the administrator validate the metadata | The status of the metadata is 'validated' |
| 8 | Search the metadata SM2 and SM3 in the EO4wildlife catalogue | The metadatas are added to the catalogue automatically |
| 9 | Disconnect the administrator session Connect as an user Go to the services catalogue | The metadata MP2 and MP3 are available in the catalogue to any user |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-ValMeta-0440/T: Validation of product or service EO4-FCT-ValMeta-0450/T: Check the consistency of metadata | |

Test Case EO4WF-20: EO4-Administration-060-Invalidate a metadata product [Version : 1]

Summary:

The purpose of the test case is to show how to invalidate a metadata product :
 - The administrator can invalid only the metadata in state 'valid'
 - The invalid metadata is not available to others users

Preconditions:

Connect as an administrator

Have in the database metadata product in state 'validated' and 'to validate'

| #: | Step actions: | Expected Results: |
|---------------------------------|--|---|
| 1 | Connect to the application as an administrator Click on 'Manage metadata', and select the metadata product in state 'to validated' Invalidate the metadata | It is not possible to invalidate the metadata It is only possible to switch the state to 'in progress' |
| 2 | Search in the catalogue the metadata product MP in state 'validated' Change the state to 'invalid' | It is possible to invalidate it The state of the metadata is 'invalid' |
| 3 | Disconnect the session Connect as a user Search the metadata product MP | The metadata is not accessible to the other users |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-InvMeta-0460/T: Invalidation of a product or service | |

Test Case EO4WF-25: EO4-Administration-070-Invalidate a service metadata [Version : 1]
Summary:

The purpose of the test case is to show how to invalidate a service metadata :

- The administrator can invalid only the metadata in state 'valid'
- The invalid metadata is not available to others users

Preconditions:

Connect as an administrator

Have in the database service metadata in state 'validated' and 'to validate'

| #: | Step actions: | Expected Results: |
|---------------------------------|---|---|
| 1 | Connect to the application as an administrator Click on 'Manage metadata', and select the service metadata in state 'to validate' Invalidate the metadata | It is not possible to invalidate the metadata It is only possible to switch the state to 'in progress' |
| 2 | Search in the catalogue the service metadata SM in state 'validated' Change the state to 'invalid' | It is possible to invalidate it The state of the metadata is 'invalid' |
| 3 | Disconnect the session Connect as a user Search the service metadata SM | The metadata is not accessible to the other users |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-InvMeta-0460/T: Invalidation of a product or service | |

3.2.3 Test Suite: Test of service

Test Case EO4WF-22: EO4-Administration-080-Test the uploaded service [Version : 1]

Summary:

The purpose of the test case is to describe how to test an uploaded service:

- The administrator tests the uploaded service
- If the test is OK, then the service is ready
- The ready service is available in the catalogue service to be run
- The administrator can validate a service which has been invalidated

This test can be run in different environments according to the service deployment policy.

Preconditions:

Connect as an administrator

Have in the database a service S1 in state 'uploaded', for which the upload is NOT OK

Have in the database a service S2 in state 'uploaded', for which the test is NOT OK

Have in the database a service S3 in state 'uploaded', for which the test is OK (and the service metadata is validated)

Have in the database a service S4 in state 'invalid', for which the test is OK now

| #: | Step actions: | Expected Results: |
|---------------------------------|---|--|
| 1 | Connect to the application as an administrator Click on 'Test services', and search the service S1 | The administrator has access to the service and input products |
| 2 | Upload the service to test | There is a problem when uploading the service |
| 3 | Change the state of the service to 'to upload' | The service is with state 'to upload' |
| 4 | Search the service S2 Upload the service to test it | The uploaded is tested OK |
| 5 | Run the service | The service can be run |
| 6 | Compare the results with the results provided by the service provider | The results are not the same |
| 7 | The test is not OK Change the state of the service to 'to upload' | The service is to 'to upload' state The service has to be uploaded and tested again |
| 8 | Search the service S3 Upload the service and run it | The upload of the service is OK and the service is run The results are the same as the results provided by the service provider |
| 9 | See the service medatata | The service metadata is validated |
| 10 | Change the state of the service to 'ready' | The service is ready The service is available in the catalogue service to be run by users |
| 11 | Search the invalid service S4 Run the service | The test is OK now and the results are the same as results provided by the service provider |
| 12 | Change the state to 'ready' | The service is 'ready' |
| 13 | Disconnect the session, and connect with a user profile Search the services S3 et S4 | The services S3 and S4 are available in the catalogue service It is possible to run them |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-InvMeta-0470/T: Testing the service | |

Test Case EO4WF-23: EO4-Administration-090-Invalidate a service [Version : 1]
Summary:

The purpose of the test case is to show that :

- The administrator can invalid a service
- The invalid service is not visible by the users except the administrator

Preconditions:

Connect as an administrator

Have in the database a service

| #: | Step actions: | Expected Results: |
|---------------------------------|---|--|
| 1 | Connect to the application as an administrator Click on 'Test services', and search a service in state 'ready' Change the status to 'invalid' | The administrator can invalid the service |
| 2 | Search again the service Modify the service | The service is available for the administrator He can modify it |
| 3 | Disconnect the session, and connect as a user Search the invalid service | The invalid service is not accessible to others users except for the administrator |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-InvMeta-0490/T: Invalidation of a service | |

3.3 Test Suite: Integration of products and services

3.3.1 Test Suite: Description of a product

Test Case EO4WF-6: EO4-Product-010-Creation of the metadata product from scratch [Version : 1]

Summary:

This test case describes how to generate a product description from scratch :

- All fields are mandatory to create a description of product :
 - Product ID
 - Product name
 - Overview
 - Full description
 - Product Provider Identifier
 - Category
 - Download URL: access point to extract the product
 - Display URL: access point to display the product, when available
 - GetDescription: access point to get the dataset description, when available
 - Product level: L2, L3, L4,..
 - The projection, when needed
 - The updating frequency and time if any
 - GetSize: access point to get the estimated size of an extraction
 - Credentials: login and password to extract product (when required)
- When a product provider begin to describe a product, the metadata is in the 'in progress' state
- It is possible to import automatically the dataset description
- After creation, the product metadata is pushed into the product catalogue
- A creation date/time of the metadata is created automatically
- The update date/time of the metadata is equal to the creation date/time the first time
- After creation, the metadata product is set to 'to validate' by the system
- It is possible to upload a quicklook
- The metadata product after creation is not accessible by the product discovery
- It is possible during the description, to save temporarily its form, and complete it later in another session

Preconditions:

Connect with product provider profile

| #: | Step actions: | Expected Results: |
|----|---|---|
| 1 | Connect to the application with a product provider profile Select the 'product description', then the create option | The system displays the different information required to the description : Product ID, Product name, Overview, Full description, Product provider identifier, Category, Download URL, Display URL, Getdescription, Product level, The projection, The updating frequency and time, GetSize, and Credentials |
| 2 | Validate the creation | An error message is displayed All mandatory fields are marked in red |
| 3 | Complete the fields : Product ID, Product name, Overview, Full description, Product provider identifier Open the predefined list of Category | The list contains: Ocean, Atmosphere or Sea Ice |
| 4 | Click on Download URL | A window appears to download URL to extract the product |
| 5 | Select an URL and click on 'validate' button | The URL is validated |

| | | |
|---------------------------------|--|---|
| 6 | Click on Display URL | A window appears to get the URL to display the product |
| 7 | Close the windows | The URL is not selected |
| 8 | Click again on Display URL Select an URL and click on 'validate' button | The URL is selected |
| 9 | Complete Product level and the Projection Click on GetDescription | A window appears to select a dataset description |
| 10 | Select a description and click on 'validate' button | A message appears : the system asks the product provider if he wants to import automatically the description : variables, time coverage, temporal resolution, geographical coverage, spatial resolution |
| 11 | Don't validate the message | The description is not imported automatically The product provider has to complete manually the description : variables, time coverage, temporal resolution, geographical coverage, spatial resolution |
| 12 | Click again on GetDescription, and validate the message | The description is imported automatically : variables, time coverage, temporal resolution, geographical coverage, spatial resolution |
| 13 | Complete GetSize | If an URL does not exist, the product provider enters a default size for an extraction |
| 14 | Select the created product metadata, and click on upload a quicklook | It is possible to upload a quicklook for the metadata product |
| 15 | Save the form and quit the session | The user is disconnected |
| 16 | Connect again and go to 'product description' | The user finds the product description already saved, and he can complete it The metadata product is in the 'In progress' state |
| 17 | Validate the creation | The metadata product is created, and the system set it to the 'to validate' state The metadata product is pushed into the product catalogue The system generates automatically a creation date/time of the metadata The update date/time of the metadata is equals to the creation date/time |
| 18 | Disconnect the session and reconnect Search the created metadata product | The metadata product is not accessible by the product discovery It is visible only by the administrator |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-GEN-0030/T: Save and complete later the description EO4-FCT-GEN-0040/T: Error message EO4-FCT-DescProd-0050/T: Description of a new product EO4-FCT-DescProd-0060/T: Creation of metadata product EO4-FCT-DescProd-0070/T: State after creation metadata product | |

Test Case EO4WF-7: EO4-Product-020-Creation of the metadata product from an existing catalogue [Version : 1]
Summary:

This test describes how to create a metadata product from an existing catalogue :

- When a product provider begin to describe a product, the metadata is in the 'In progress' state
- We can complete the missing information not available in the external catalogue
- The metadata product state is 'to validated' after creation
- The product metadata is pushed into the product catalogue
- It is possible during the description, to save temporarily its form, and complete it later in another session

Preconditions:

Connect as product provider

| #: | Step actions: | Expected Results: |
|---------------------------------|---|--|
| 1 | Connect to the application with a product provider profile Select the 'product description', then the 'harvest' option | The following fields are displayed : the catalogue URL to harvest, the product identifier for the product, and the credentials if required |
| 2 | Validate | An error message is displayed The fields URL and product identifier are mandatory |
| 3 | Complete the fields Validate the request to the external | We get the available information in the form which includes all the fields of the creation : Product ID, Product name, Overview, Full description, Product provider identifier, Category, Download URL, Display URL, Getdescription, Product level, The projection, The updating frequency and time, GetSize, and Credentials If the harvest from the external catalog is not supported by the system (error in URL or in content), an error message is displayed. |
| 4 | Complete or modify some information | We can complete the missing information not available in the external catalogue |
| 5 | Save the form and quit the session | The user is disconnected |
| 6 | Connect again and go to 'product description' | The user finds the product description already saved, and he can complete it The metadata product is in the 'In progress' state |
| 7 | Validate the information | The product metadata is created, and is pushed into the product catalogue The state of product metadata is 'to validate' The system generates automatically a creation date/time of the metadata The update date/time of the metadata is equals to the creation date/time |
| 8 | Disconnect the session and reconnect Search the created metadata product | The metadata product is not accessible by the product discovery It is visible only by the administrator |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-GEN-0030/T: Save and complete later the description EO4-FCT-GEN-0040/T: Error message | |

| | |
|--|--|
| | EO4-FCT-DescProd-0050/T: Description of a new product EO4-FCT-DescProd-0060/T: Creation of metadata product EO4-FCT-DescProd-0070/T: State after creation metadata product |
|--|--|

Test Case EO4WF-8: EO4-Product-030-Modification of the metadata product [Version : 1]
Summary:

The purpose of this test case is to show that :

- It is possible to modify a metadata product
- When the metadata is modified, it comes back to the state 'in progress'
- The modification and the updating of the metadata is only possible by the creator of the metadata or a product provider of same organization
- The metadata product returns to the state 'to validate'
- The update date/time of the metadata is modified
- The system updates automatically the time coverage information

Preconditions:

You must have three login :

- The product provider **PP1** who has created the metadata products **MP1** and **MP2**
- A product provider **PP2** not in the same organization as the creator of the metadata products
- A product provider **PP3** of same organization as the creator of the metadata products

| #: | Step actions: | Expected Results: |
|---------------------------------|--|--|
| 1 | Connect to the application with the user PP2 Select the metadata product MP1 and modify the fields | The user PP2 cannot modify the fields |
| 2 | Connect to the application with the user PP1 Select the metadata product MP1 and modify the fields | It is possible de modify the fields All fields can be modified The metadata pass into the state 'in progress' |
| 3 | Save the modifications | The metadata product returns to the state 'to validate' The update date/time of the metadata is modified The system updates automatically the time coverage information |
| 4 | Repeat the two precedents steps to the user PP3 and the metadata product MP2 | The user PP3 can modify the metadata. All fields can be modified The metadata product returns to the state 'to validate' The update date/time of the metadata is modified The system updates automatically the time coverage information |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-DescProd-0080/T: Modification of metadata product EO4-FCT-DescProd-0100/T: Updating the time coverage | |

Test Case EO4WF-9: EO4-Product-040-Delete of the metadata product [Version : 1]
Summary:

This test case describes that :

- The product provider cannot delete a metadata product, except if the metadata is in progress
- He can change the state from 'valid' to 'invalid'

Preconditions:

Connect as product provider

Have in the database a product metadata in state 'in progress', 'to validate', 'validated' and 'invalid'

| #: | Step actions: | Expected Results: |
|---------------------------------|--|--|
| 1 | Connect to the application as a product provider Select a metadata product in state 'invalid' and delete it | It is not possible to delete the metadata product |
| 2 | Select a metadata product in state 'to validate' and delete it | It is not possible to delete the metadata |
| 3 | Select a metadata product in state 'in progress' and delete it | It is possible to delete the metadata The metadata product is deleted |
| 4 | Select a metadata product in state 'validated' and delete it | It is not possible to delete the metadata product |
| 5 | Modify the state 'validated' to 'invalid' | It is possible to modify the state to 'invalid' |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-DescProd-0090/T: Delete of metadata product | |

3.3.2 Test Suite: Description of a service

Test Case EO4WF-10: EO4-Service-010-Creation of a service metadata [Version : 1]

Author: ksbihi - 07/06/2016 10:47:14

Last edit by: jzigna - 28/07/2016 07:55:57

Summary:

The purpose of this test case is to show that we can create a service metadata.

- All fields are mandatory to create a description of service :

- Service ID
- Service name
- Input product: ARGOS or in situ locations (CSV or XML file, or URL for extraction)
- Parameters: Any value required to process the input product (threshold values for a filter, interpolation step or selection of the ARGOS location class to consider for a track computation for instance)
- Available output products and associated formats:
 - File: CSV, netcdf, KML, PDF report
 - URL: HTTP/WMS, HTTP/WFS, HTTP/WCS to visualize the result
 - Auxiliary data: identifier of any additional product with a list of:
 - Protocol used to access the service
 - URL access when dynamic auxiliary data have to be loaded by the service
 - Login/password to access the product
 - If an auxiliary data is static, as a configuration file, it could be just mentioned in the description of the service
- Overview
- Full description
- Category: predefined values from the catalogue
- Type of service: track processing, filter, behavior monitoring, thematic
- Required Resources:
 - Physical resources required to run the service: memory, disk, OS, software
 - Operational service level : on demand, on line, replicated:
 - On demand: when a user runs the service
 - On line: the service is deployed to be accessible quickly
 - Replicated: a high level of availability is required
 - Target : EO4wildlife platform or server URL (Scientist server) where is deployed the service
 - Nominal duration in seconds: this information provides the nominal elapsed time for a typical amount of input
- Service Provider Identifier: Organization and Name

When a service provider begins to describe a service, the metadata is in the 'in progress' state

After creation, the service metadata is pushed into the service catalogue

A creation date/time of the metadata is created automatically

The update date/time of the metadata is equal to the creation date/time the first time

After creation, the metadata service is set to "to validate" by the system

The metadata service after creation is not accessible by the service discovery

It is possible during the description, to save temporarily its form, and complete it later in another session

Preconditions:

Connect as a service provider

| #: | Step actions: | Expected Results: |
|----|--|---|
| 1 | Connect to the application with a service provider profile Select the 'service description', then the 'create' option | The system displays the different information required to the description : Service ID, Service name, Input product, Parameters, Available output products and associated formats, Auxiliary data, Overview, Full description, Category, Type of service, Required resources, Operational service level, Target, Nominal duration, Service |

| | | |
|--|---|---|
| | | Provider Identifier |
| 2 | Validate | An error message is display All mandatory fields are marked in red |
| 3 | Complete the fields : Service ID, Service name, Input product, Parameters In the field Output products, set a file with a format different of : CSV, netcdf, KML and PDF report | An error message is displayed The format is different from the required |
| 4 | Set a good format Set an URL different of HTTP/WMS, HTTP/WFS, HTTP/WCS | An error message is displayed The URL is different from the required |
| 5 | Set a good URL In Auxiliary data, fill all fields : Protocol, URL access, Login/password Set an Overview and a full description Go to the field Category | The values of category is predefined from the catalogue: turtle, birds, marine mammals, fish, protected areas |
| 6 | Open the list of values of Type of service | It contains : track processing, filter, behavior monitoring, thematic |
| 7 | Open the list of values of Resources | The physical resources are: memory, disk, OS, software |
| 8 | Open the list of values of Operational service level | It contains : on demand, on line and replicated |
| 9 | Select one level operational service Fill the Target, the Nominal duration and the Service provider Identifier Save the form and quit the session | The user is disconnected |
| 10 | Connect again Go to 'Service description' and 'Create' option | The description of the service metadata already completed are available It is possible to complete the description The service metadata is in the state 'in progress' |
| 11 | Complete or modify the description Validate the creation | The service metadata is created, and the system set it to the 'to validate' state The service metadata is pushed into the service catalogue The system generates automatically a creation date/time of the metadata The update date/time of the metadata is equals to the creation date/time |
| 12 | Disconnect of the session and connect Search the created service metadata | The service metadata is not accessible by the service discovery It is visible only by the administrator |
| <u>Execution type:</u> | Manual | |
| <u>Estimated exec. duration (min):</u> | | |
| <u>Importance:</u> | Medium | |
| <u>Requirements</u> | EO4-FCT-GEN-0030/T: Save and complete later the description EO4-FCT-GEN-0040/T: Error message EO4-FCT-DescServ-0110/T: Description of a new service EO4-FCT-DescServ-0120/T: State after creation service metadata | |

Test Case EO4WF-11: EO4-Service-020-Modification of the service metadata [Version : 1]
Summary:

The purpose of this test case is to show that :

- It is possible to modify a service metadata
- When the metadata is modified, it comes back to the state 'in progress'
- The modification and the updating of the metadata is only possible by the creator of the metadata or a service provider of same organization
- The metadata service returns to the state 'to validate'
- The update date/time of the metadata is modified
- The system updates automatically the time coverage information

Preconditions:

You must have three login :

- The service provider **SP1** who has created the service metadata **SM1** and **SM2**
- A service provider **SP2** not in the of same organization as the created of the service metadata
- A service provider **SP3** of same organization as the created of the service metadata

| #: | Step actions: | Expected Results: |
|---------------------------------|---|--|
| 1 | Connect to the application with the user SP2 Select the service metadata SM1 and modify the fields | The user SP2 cannot modify the fields |
| 2 | Connect to the application with the user SP1 Select the service metadata SM1 and modify the fields | It is possible de modify the fields All fields can be modified The metadata pass into the state 'In progress' |
| 3 | Save the modifications | The service metadata returns to the state 'to validate' The update date/time of the metadata is modified The system updates automatically the time coverage information |
| 4 | Repeat the two precedents steps to the user SP3 and the service metadata SM2 | The user SP3 can modify the metadata. All fields can be modified The service metadata returns to the state 'to validate' The update date/time of the metadata is modified The system updates automatically the time coverage information |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-DescServ-0130/T: Modification of service metadata | |

Test Case EO4WF-12: EO4-Service-030-Delete of the service metadata [Version : 1]

Summary:
 This test case describes that :
 - The service provider cannot delete a service metadata except if the metadata is 'in progress'
 - He can change the state from 'valid' to 'invalid'

Preconditions:
 Connect as a service provider
 Have in the database a service metadata in state 'in progress', 'to validate', 'validated' and 'invalid'

| #: | Step actions: | Expected Results: |
|---------------------------------|--|---|
| 1 | Connect to the application as a service provider Select a service metadata in state 'invalid' and delete it | It is not possible to delete the service metadata |
| 2 | Select a service in state 'In progress' and delete it | It is possible to delete the metadata service |
| 3 | Select a service in state 'validated' and delete it | It is not possible to delete the metadata service |
| 4 | Select a service metadata in state 'valid' and delete it | It is not possible to delete the service metadata |
| 5 | Modify the state 'valid' to 'invalid' | It is possible to modify the state to 'invalid' |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-DescServ-0140/T: Delete of service metadata | |

3.3.3 Test Suite: Upload of a service

| Test Case EO4WF-13: EO4-Service-040-Upload a service [Version : 1] | | |
|---|--|---|
| <p>Summary: This test case describes how to upload a service If the upload is run without error, the service switches to the 'uploaded' state</p> | | |
| <p>Preconditions: Connect as a service provider Have describe one service S1 with error Have describe one service S2 without error</p> | | |
| #: | Step actions: | Expected Results: |
| 1 | Connect to the application with a service provider profile Select the service S1 Click on 'upload' | The upload is run with an error |
| 2 | Select the service S2 Click on 'upload' | The upload is run without error The state of the service is 'uploaded' |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-GEN-0040/T: Error message EO4-FCT-UplServ-0160/T: Uploading a new service | |

Test Case EO4WF-26: EO4-Service-050-Delete a service [Version : 1]
Summary:

The purpose of the test case is to show that :

- A delete is only possible during the service is 'to upload'
- The service provider can delete it

Preconditions:

Connect as a service provider

Have in the database a service in state 'to upload', 'uploaded', 'ready'

| #: | Step actions: | Expected Results: |
|---------------------------------|---|---------------------------------|
| 1 | Connect as a service provider Select a service in state 'to upload', and delete it | The service is deleted |
| 2 | Select a service in state 'uploaded' Delete it | It is not possible de delete it |
| 3 | Select a service in state 'ready' Delete it | It is not possible de delete it |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | None | |

3.4 Test Suite: Discovery, service run and display

3.4.1 Test Suite: Discover a product

Test Case EO4WF-14: EO4-Product-050-Discover a product [Version : 1]

Summary:

The purpose of this test case is to show how to discover a product:

- Any user has access to 'Discover product'
- The search criteria are:
 - . Product type
 - . Variable : physical or biological identifier
 - . Temporal resolution
 - . Geographical resolution
 - . Product level: L2, L3, L4,...
 - . Period : begin and end dates
 - . Geographical area : min/max longitude, min/max latitude
- Once the user fills all inputs and press 'search' button, the application shows the number of matching products and the search criteria
- Only the validated products are displayed in the result
- For each matching product we have:
 - . The product name
 - . A brief description of the product
 - . The time coverage
 - . A 'quick look' option of the product if available
 - . The 'display' option
 - . The 'download' option
 - . A 'more info' option
- It is possible to sort the result of the research by time coverage or by product name

Preconditions:

Connect with any user

Have in the database, a product with the status 'invalid', 'to validate', 'validated', 'in progress'

| #: | Step actions: | Expected Results: |
|----|--|--|
| 1 | Connect to the application with any user Click on 'Discover product' function | The screen is divided into two parts: Search product and the EO4 wildlife catalogue |
| 2 | Go to the bloc Search product | The search criteria are: Product type Variable : physical or biological identifier Temporal resolution Geographical resolution Product level Period : begin and end dates Geographical area : min/max longitude, min/max latitude |
| 3 | Open the list of values of Product type | The list of values contains the values : ocean, atmosphere, sea ice |
| 4 | Enter several criteria in the bloc search product Press on Search button | The number of matching products is displayed The search criteria are shown, and it is possible to clean and to refresh the criteria Only validated products are displayed in the result |
| 5 | Sort the search result by name | It is possible to sort by name |

| | | |
|---------------------------------|--|--|
| 6 | Sort the search result by time coverage | It is possible to sort by time coverage |
| 7 | Go to the result | For each matching product we have: product name, brief description of the product, time coverage, 'quick look' option of the product if available, 'display' option, 'download' option, 'more info' option |
| 8 | Press on 'more info' option | The product detailed information are displayed |
| 9 | Press on 'display' option | The product is displayed |
| 10 | Press on 'quick look' (if available) | The product is displayed if available |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-DiscProd-0170/T: Discovering a product EO4-FCT-DiscProd-0180/T: Availability of product | |

| Test Case EO4WF-15: EO4-Product-060- Extract a product [Version : 1] | | |
|--|---|---|
| <p>Summary:</p> <p>The purpose of the test case is to show that :</p> <ul style="list-style-type: none"> - The user can extract part of the data product, and save it locally or in the platform with a retention duration - The extracted data should be less than 1 Gb | | |
| <p>Preconditions:</p> <p>Connect with any user</p> <p>Have in the catalogue a product with a capacity less than 1 Gb, and an another with a capacity more than 1Gb</p> | | |
| #: | Step actions: | Expected Results: |
| 1 | Connect to the application with any user Click on 'Discover product' function Enter one or several criteria and press on 'search' | The result of the research is displayed |
| 2 | Select one product for which the data capacity is more than 1 Gb Click on 'download' option | An error message is displayed The extracted data should be less than 1 Gb |
| 3 | Select one product for which the data capacity is less than 1 Gb Click on 'download' option | The user can extract part of the data product and display it |
| 4 | Save the extraction | There is two possibilities to save the extraction - locally - in the platform |
| 5 | Save the extracted product locally | The extracted product is saved locally |
| 6 | Repeat the previous two steps for the case where the extraction is saved in the platform | The extracted product is saved in the platform |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-GEN-0040/T: Error message EO4-FCT-DiscProd-0190/T: Extraction of part of the data product EO4-FCT-DiscProd-0200/T: Capacity of the extracted data | |

3.4.2 Test Suite: Discover a service

Test Case EO4WF-16: EO4-Service-060-Discover a service [Version : 1]

Summary:

The purpose of this test case is to show how to discover a service:

- Any user has access to 'Discover service' function
- Only the validated services are available to the users
- The search criteria are :
 - . Category : turtle, marine mammals, fish, protected marine area
 - . Service type : track processing, filter, behavior monitoring, thematic
 - . Service provider
 - . Output protocol/formats : wms, wfs, ftp, netcdf, pdf
- The results are displayed in a list with the search criteria and the number of matching services
- For each matching service we have :
 - . The service ID and the name
 - . The description of the service
 - . The target to access the service: EO4wildlife platform or server URL
 - . A 'More info' button to access to the detailed description of the service

Preconditions:

Connect as any user

Have in the database services in state 'to validate', 'in progress', 'invalid' and 'validated'

| #: | Step actions: | Expected Results: |
|---------------------------------|--|--|
| 1 | Connect to the application with any user Click on 'Discover service' function | The screen is divided into two parts: Search service and the EO4 wildlife catalog |
| 2 | Go to the bloc Search service | The search criteria are: Category, Service type, Service provider and Output protocol/formats |
| 3 | Open the LOV of Category | The list of values contains : turtle, birds, marine mammals, fish, protected marine area |
| 4 | Open the list of values of Service type | The list of values contains : track processing, filter, behavior monitoring, thematic |
| 5 | Open the list of values of Output Protocol/Formats | The list of values contains : wms, wfs, ftp, netcdf, pdf |
| 6 | Press on the button 'Search' | The result is displayed in a list The number of matching services is displayed Only the validated services are available |
| 7 | Go to the bloc result | For each service, are displayed : <ul style="list-style-type: none"> - The service ID and name - The description of the service - The target to access the service: EO4wildlife platform or server URL - A 'More Info' button to access to the detailed description of the service |
| 8 | Select one service and click on 'More info' | The detailed description of the service is displayed |
| 9 | Search again a service but with one or more criteria | The number of matching services is displayed The search criteria are shown, and it is possible to clean and to refresh the criteria |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |

| | |
|--------------|--|
| Requirements | EO4-FCT-DiscServ-0210/T: Discovering a service EO4-FCT-DiscServ-0220/T: Availability of service |
|--------------|--|

| Test Case EO4WF-17: EO4-Service-070-Save a service [Version : 1] | | |
|---|---|---|
| <p>Summary: The purpose of the test case is to show that - We can save a service in a cart or in bookmark</p> | | |
| <p>Preconditions: Connect as any user</p> | | |
| #: | Step actions: | Expected Results: |
| 1 | Connect to the application with any user Click on 'Discover service' function Select one or more criteria and click on 'search' | The results are displayed |
| 2 | Select one service and click on 'More info' button | The detailed description of the service is displayed There are two options : 'Save into a cart' and 'Save as a bookmark' |
| 3 | Select 'Save into a cart' Go the "My cart" | The service is accessible in the cart |
| 4 | Back to the search Select another service, and then 'Save as a bookmark' Go to the bookmark | The service is accessible in the bookmark |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-DiscServ-0230/T: Saving a service | |

3.4.3 Test Suite: Run Service

| Test Case EO4WF-31: EO4-Service-080-Connection from a thematic platform [Version : 1] | | |
|---|---|--|
| <u>Author:</u> | ksbihi - 13/06/2016 16:34:20 | |
| <u>Last edit by:</u> | jzigna - 22/07/2016 14:02:00 | |
| <u>Summary:</u> | This test case is to show how any thematic platform can redirect to the EO4wildlife platform. | |
| <u>Preconditions:</u> | Connect as a user on any thematic platform | |
| <u>#:</u> | <u>Step actions:</u> | <u>Expected Results:</u> |
| 1 | Connect to a thematic platform Extract data and push them in the user private area of the EO4wildlife platform | The data to process is uploaded in the private area of the user in the EO4wildlife platform. |
| 2 | Connect to the EO4wildlife platform. Execute a service for the exported data. | The service is executed successfully. |
| <u>Execution type:</u> | Manual | |
| <u>Estimated exec. duration (min):</u> | | |
| <u>Importance:</u> | Medium | |
| <u>Requirements</u> | EO4-FCT-RunServ-0320/T: Calling a service by a platform | |
| <u>Keywords:</u> | None | |

Test Case EO4WF-28: EO4-Service-090-Save a new service without errors [Version : 1]
Summary:

The purpose of the test is to show that :

- A user can create a service as a workflow of a selection of services
- Typical steps of a workflow definition can be thematic or global
- The system checks that the output of the current step is compliant as an input of the following steps, otherwise an error message is displayed
- The EO4WildLife system checks the validity of the workflow:
 - The output of a step has to be compliant with the input of the following step
 - All required parameters and auxiliary data should be available
 - All auxiliary data and service steps should be declared as valid in the catalogue

Preconditions:

Connect as a user

Have in the cart many services

| #: | Step actions: | Expected Results: |
|---------------------------------|--|---|
| 1 | Connect to the application as a user Open the bookmark | The bookmark contains many services |
| 2 | Select three services to add to workflow Click on 'Add service to workflow' | The services are available in the input container |
| 3 | Fit service position in the workflow | It is possible to fit the position of service in the workflow |
| 4 | Remove one service from the currently workflow | The service is removed |
| 5 | Add the service again to the workflow | The service is added |
| 6 | Go to the steps of a workflow definition | The typical steps can be thematic or global |
| 7 | Select an output of the step 1 to be compliant with the input of the following step 2 Select an output of the step 2 to be compliant with the input of the following step 3 | The output/input are selected |
| 8 | Fill in all parameters with a valid values Fill in the auxiliary data with a valid values Save | A windows appears to name the service |
| 9 | Give a name for the workflow Validate | The workflow is saved as a service |
| 10 | Add this service to the bookmark | The new service is added to the bookmark |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-RunServ-0250/T: Creating a service as workflow EO4-FCT-RunServ-0260/T: Validity of a run EO4-FCT-RunServ-0270/T: The steps of a workflow definition | |

| Test Case EO4WF-29: EO4-Service-100-Save a new service with errors [Version : 1] | | |
|--|---|---|
| <u>Author:</u> | ksbihi - 13/06/2016 14:25:13 | |
| <u>Last edit by:</u> | jzigna - 26/07/2016 14:43:18 | |
| <u>Summary:</u> | <p>The purpose of the test is to show that an error is displayed when saving in the following cases :</p> <ul style="list-style-type: none"> - If the output of a step is not compliant as an input of the following step - If the auxiliary data are not available on the area of interest or over the time of interest - Parameters are not all valuated by the user - Any auxiliary data or service steps are not valid in the catalogue | |
| <u>Preconditions:</u> | <p>Connect as a user Have an invalid service : the service is not in the ready state. Have auxiliary data NOT valid: time of Interest not covering the input, area of interest not covering the input, associated metadata invalid) Have a parameter NOT valid (the user forgot to enter a value, or out of the expected min/max range)</p> | |
| <u>#:</u> | <u>Step actions:</u> | <u>Expected Results:</u> |
| 1 | Connect to the application as a user Go to the bookmark, and add to the workflow two services for which one of them is invalid | The services are added to the workflow |
| 2 | Fill in all parameters and fields with valid information Save and try to run the workflow. | An error message is displayed with invalid service name. |
| 3 | Remove the invalid service from the workflow Add a valid service | The new service is added |
| 4 | Select an output of step 1 not compliant as an input of step 2 Fill in all parameters and fields with valid information Save | An error message is displayed detailing the problem with input/output |
| 5 | Select the output to be compliant as an input of the following step Make invalid a metadata of an auxiliary data used by the second service Fill in all others parameters with a valid information Save and run | An error message is displaying the invalid metadata name. |
| 6 | Make valid the metadata of all auxiliary data for services in the workflow. Enter a parameter value out of the min/max expected thresholds Save and run | An error message is displaying the parameter name, its value and authorized min/max values. |
| 7 | Enter only valid parameter values. Select an input not compliant with the area or time period covered by an auxiliary data Save and run | An error message is displayed to list the AOI and TOI and the auxiliary data not compliant with them. |
| 8 | Add the workflow in the bookmark, even if invalid | The service is added |
| <u>Execution type:</u> | Manual | |
| <u>Estimated exec. duration (min):</u> | | |

| | |
|---------------------|---|
| <u>Importance:</u> | Medium |
| <u>Requirements</u> | EO4-FCT-RunServ-0250/T: Creating a service as workflow EO4-FCT-RunServ-0260/T: Validity of a run |

Test Case EO4WF-30: EO4-Service-110-Run a service [Version : 1]
Summary:

The purpose of the test case is to prove that a user can run a service :

- The system asks the user if he wants to update the parameters
- A run can be executed for 100 millions of input positions
- The user must confirm the execution of the run
- A typical execution time is displayed
- The user can save the results of the run with a run identifier
- After the run, a mail is send to the user, describing the status of execution for each step of the workflow and including the way to access to the steps outputs he selected (WMS, PDF report...)
- A history of all executions is available

Preconditions:

Connect as a user

Have in the bookmark at least one service coming from a workflow (For example the service created in the test EO4-Service-090)

| #: | Step actions: | Expected Results: |
|----|--|---|
| 1 | Connect to the application as a user Open the bookmark | The user has at least one service coming from a workflow |
| 2 | Select the service | The user can access to the step outputs and the auxiliary data involved in the process |
| 3 | Select the service Press the button 'Run' | A message is displayed The system asks the users if he wants to update the parameters |
| 4 | Press on 'No' | All parameters are not displayed for any update The current values of the parameters are used in the run |
| 5 | Press the button 'Run' | A message is displayed The user must confirm or not the execution |
| 6 | Dont validate the message | The execution is not running |
| 7 | Press the button 'Run' and validate the message | The service is running The run can be executed for 100 millions of input positions |
| 8 | Wait for execution | The service is run A typical execution time is displayed to the user as the sum of the nominal durations of the involved services |
| 9 | Save the result of the run | The user can save the results of the run with a run identifier The run identifier is generated by the system |
| 10 | Check the email inbox of the user | At the end of the execution, the user receives a mail describing the status of execution for each step of the workflow and including the way to access to the steps outputs he selected (WMS, PDF report...). |
| 11 | Click in the mail on the links to access to the display of the inputs, outputs and auxiliary data of the run | All access links work correctly |
| 12 | Select now from the bookmark another service Press the button 'Run' | The system asks the user if he wants to update the parameters |
| 13 | Press on 'Yes' | All the parameters are displayed for any update |

| | | |
|---------------------------------|---|---|
| 14 | Fill in all parameters with a valid one Use several auxiliary data Press the button 'Run' and validate the message | The service is run When several auxiliary data are used during the process, the EO4wildlife platform allows the user to select and display them in distinct layers |
| 15 | Go to the bloc 'Service runs outputs' | A history of all executions is available The user can quickly visualize the different runs he made and results he got |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-RunServ-0240/T: Running a service EO4-FCT-RunServ-0250/T: Creating a service as workflow EO4-FCT-RunServ-0280/T: Running a workflow EO4-FCT-RunServ-0290/T: Saving a run result of a workflow EO4-FCT-RunServ-0310/T: Visualization of all runs of a workflow EO4-PRF-RunServ-0330/T: Execution of a run | |

| Test Case EO4WF-32: EO4-Service-120-Reuse a workflow definition [Version : 1] | | |
|---|--|--|
| <u>Author:</u> | ksbihi - 13/06/2016 16:56:50 | |
| <u>Last edit by:</u> | jzigna - 22/07/2016 14:59:54 | |
| <u>Summary:</u> This test case is to prove that we can reuse a service definition including a workflow and execute a new run | | |
| <u>Preconditions:</u> Connect as a user An execution of a service made of a workflow was saved with the associated parameters values. | | |
| <u>#:</u> | <u>Step actions:</u> | <u>Expected Results:</u> |
| 1 | Connect to the application Go to the bookmark, and select the service (defined by a workflow) Add it to the workflow service | The service definition is loaded with the associated parameters values. |
| 2 | Change input products Change one or many parameters Save | The new service is saved after the display of a confirmation which ask if the service definition should be overwritten or if the new definition should be saved with a new name. |
| 3 | Click on Run and confirm the execution | The new service is run A typical execution time is displayed |
| 4 | Save the results of the run | The results are saved with a run identifier The user receives a mail |
| 5 | Go to the bloc 'Service run outputs' Select a run | The information of the run are displayed |
| 6 | Press the button 'Reuse a service definition' and execute it. | The service is running again The results are saved with another run identifier |
| 7 | Go to the historical of the runs | The second run is displayed |
| <u>Execution type:</u> | Manual | |
| <u>Estimated exec. duration (min):</u> | | |
| <u>Importance:</u> | Medium | |
| <u>Requirements</u> | EO4-FCT-RunServ-0300/T: Reusing a workflow | |

3.4.4 Test Suite: Display and on-line tools

Test Case EO4WF-34: EO4-Tools-010-Visualization [Version : 1]

Summary:

The purpose of the test is to show that the user can visualize products, auxiliary data and services outputs in the web interface.

- He can ask a display in distinct tabs, or in single tab with an overlay of layers
- For each layer, additional tools can be used to perform the following actions:
 - Select a colour map for the display
 - Adjust automatically the min-max value of the colour map to the displayed data
 - Use a linear or logarithm scale in the colour map
 - Define the transparency level
 - Select a location and retrieve the physical value for the layer on this location
 - Draw a transect polyline when 3D data are displayed, and get the associated transect
 - Draw polylines when 2D data are displayed and get the associated curve
 - Define a mask with a min max value definition. All mismatching data will be made transparent

Preconditions:

Connect to the application as a user

Have a product, an auxiliary data and a service outputs

| #: | Step actions: | Expected Results: |
|-----------------|--|--|
| 1 | Connect to the application as a user Click on 'Run service' | The function 'Display and on-line tools' is available |
| 2 | Click on 'Discover products' | The function 'Display and on-line tools' is available |
| 3 | Select a product to visualize If a previous product instance was displayed, he can ask a display in distinct tabs, or in a single tab with an overlay of layers | The product is displayed |
| 4 | Click on distinct tabs | The result of the product is displayed in a distinct tabs |
| 5 | Click now on single tab | The result is displayed in a single tab with an overlay of layers |
| 6 | Verify the available tools for each layer in the two cases | For each layer, additional tools can be used to perform the following actions: <ul style="list-style-type: none"> · Select a colour map for the display · Adjust automatically the min-max value of the colour map to the displayed data · Use a linear or logarithm scale in the colour map · Define the transparency level · Select a location and retrieve the physical value for the layer on this location · Draw a transect polyline when 3D data are displayed, and get the associated transect · Draw polylines when 2D data are displayed and get the associated curve · Define a mask with a min max value definition. All mismatching data will be made transparent |
| 7 | Repeat the preceding steps for an auxiliary data | The results of the preceding steps are valid for an auxiliary data |
| 8 | Repeat the preceding steps for a service output | The results of the preceding steps are valid for a service output |
| Execution type: | Manual | |

| | |
|---------------------------------|---|
| Estimated exec. duration (min): | |
| Requirements | EO4-FCT-Display-0340/T: Visualization of products and service outputs EO4-FCT-Display-0350/T: Layer configuration display EO4-FCT-Display-0360/T: Application of a mask EO4-FCT-Display-0370/T: Displaying the data values |

Test Case EO4WF-35: EO4-Tools-020-Colour map [Version : 1]
Summary:

This test is to show that we can select a colour map for the display

Preconditions:

Connect as a user

Have a product, an auxiliary data and a service outputs

| #: | Step actions: | Expected Results: |
|---------------------------------|--|--|
| 1 | Connect to the application as a user Click on 'Discover product' and select a product to display | The product is discovered |
| 2 | Click on 'Display and on-line tools' | The product is displayed |
| 3 | Select the product and ask for the display in a single or distinct tabs | The product is displayed All additional tools are available |
| 4 | Select a colour map for the display | It is possible to select a colour map for the display |
| 5 | Repeat the preceeding steps for an auxiliary data and a service outputs | It is possible to select a colour map for the display of an auxiliary data and a service outputs |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-Display-0340/T: Visualization of products and service outputs EO4-FCT-Display-0350/T: Layer configuration display | |

Test Case EO4WF-36: EO4-Tools-030-Adjust the min-max value [Version : 1]
Summary:

This test is to show that we can adjust automatically the min-max value of the colour map of the displayed data

Preconditions:

Connect as a user

Have a product, an auxiliary data and a service outputs

| #: | Step actions: | Expected Results: |
|---------------------------------|--|---|
| 1 | Connect to the application as a user Click on 'Discover products' and select a product to display | The product is discovered |
| 2 | Click on 'Display and on-line tools' | The product is displayed |
| 3 | Select the result and ask in a single or distinct tabs | The product is displayed All additional tools are available |
| 4 | Select the tool : adjust automatically the min-max value | It is possible to adjust automatically the min-max value of the colour map to the displayed data |
| 5 | Repeat the preceeding steps for an auxiliary data and a service outputs | It is possible to adjust automatically the min-max value of the colour map to an auxiliary data and a service outputs |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-Display-0340/T: Visualization of products and service outputs EO4-FCT-Display-0350/T: Layer configuration display | |

Test Case EO4WF-37: EO4-Tools-040-Linear or logarithmic scale [Version : 1]
Summary:

This test is to show that we can use a linear or logarithm scale in the colour map

Preconditions:

Connect as a user

Have a product, an auxiliary data and a service outputs

| #: | Step actions: | Expected Results: |
|---------------------------------|--|--|
| 1 | Connect to the application as a user Click on 'Discover product' and select a product to display | The product is discovered |
| 2 | Click on 'Display and on-line tools' | The product is displayed |
| 3 | Select the result and ask in a single or distinct tabs | The product is displayed All additional tools are available |
| 4 | Select the tool linear or logarithmic scale in the colour map | It is possible to use a linear or logarithm scale in the colour map |
| 5 | Repeat the preceeding steps for an auxiliary data and a service outputs | It is possible to use a linear or logarithm scale in the colour map to an auxiliary data and a service outputs |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-Display-0340/T: Visualization of products and service outputs EO4-FCT-Display-0350/T: Layer configuration display | |

Test Case EO4WF-38: EO4-Tools-050-Transparency level [Version : 1]
Summary:

This test is to show that we can define the transparency level

Preconditions:

Connect as a user

Have a product, an auxiliary data and a service outputs

| #: | Step actions: | Expected Results: |
|---------------------------------|--|---|
| 1 | Connect to the application as a user Click on 'Discover product' and select a product to display | The product is discovered |
| 2 | Click on 'Display and on-line tools' | The product is displayed |
| 3 | Select the result and ask in a single or distinct tabs | The product is displayed All additional tools are available |
| 4 | Select the tool Define the transparency level | It is possible to define the transparency level |
| 5 | Repeat the preceeding steps for an auxiliary data and a service outputs | It is possible to define the transparency level for an auxiliary data and a service outputs |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-Display-0340/T: Visualization of products and service outputs EO4-FCT-Display-0350/T: Layer configuration display | |

Test Case EO4WF-39: EO4-Tools-060-Location [Version : 1]
Summary:

This test is to show that we can select a location and retrieve the physical value for the layer on this location

Preconditions:

Connect as a user

Have a product, an auxiliary data and a service outputs

| #: | Step actions: | Expected Results: |
|---------------------------------|---|--|
| 1 | Connect to the application as a user Click on 'Discover product' and select a product to display | The product is discovered |
| 2 | Click on 'Display and on-line tools' | The product is displayed |
| 3 | Select the result and ask in a single or distinct tabs | The product is displayed All additional tools are available |
| 4 | Select the location | It is possible to select a location and retrieve the physical value for the layer on this location |
| 5 | Repeat the preceeding steps for an auxiliary data and a service outputs | It is possible to select a location and retrieve the physical value for the layer on this location |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-Display-0340/T: Visualization of products and service outputs EO4-FCT-Display-0370/T: Displaying the data values | |

Test Case EO4WF-40: EO4-Tools-070-Draw in 3D [Version : 1]
Summary:

This test is to show that we can draw a transect polyline when 3D data are displayed, and get the associated transect

Preconditions:

Connect as a user

Have a product, an auxiliary data and a service outputs

| #: | Step actions: | Expected Results: |
|---------------------------------|---|--|
| 1 | Connect to the application as a user Click on 'Discover product' and select a product to display | The product is discovered |
| 2 | Click on 'Display and on-line tools' | The product is displayed |
| 3 | Select the result and ask in a single or distinct tabs | The product is displayed All additional tools are available |
| 4 | Display the data in 3D | The 3D data are displayed |
| 5 | Draw a transect polyline | It is possible to draw a transect polyline |
| 6 | Get the associated transect | The associated transect is get |
| 7 | Repeat the preceeding steps for an auxiliary data and a service outputs | It is possible to draw a transect polyline when 3D data are displayed, and get the associated transect |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-Display-0340/T: Visualization of products and service outputs EO4-FCT-Display-0370/T: Displaying the data values | |

Test Case EO4WF-41: EO4-Tools-080-Draw in 2D [Version : 1]**Summary:**

This test is to show that we can draw polylines when 2D data are displayed and get the associated curve

Preconditions:

Connect as a user

Have a product, an auxiliary data and a service outputs

| #: | Step actions: | Expected Results: |
|---------------------------------|---|---|
| 1 | Connect to the application as a user Click on 'Discover product' and select a product to display | The product is discovered |
| 2 | Click on 'Display and on-line tools' | The product is displayed |
| 3 | Select the result and ask in a single or distinct tabs | The product is displayed All additional tools are available |
| 4 | Display the data in 2D | The 2D data are displayed |
| 5 | Draw a polyline | It is possible to draw a polyline |
| 6 | Get the associated curve | The associated curve is get |
| 7 | Repeat the preceeding steps for an auxiliary data and a service outputs | It is possible to draw a polyline when 2D data are displayed and get the associated curve |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-Display-0340/T: Visualization of products and service outputs EO4-FCT-Display-0370/T: Displaying the data values | |

Test Case EO4WF-42: EO4-Tools-090-Define a mask [Version : 1]**Summary:**

This test is to show that we can define a mask with a min max value definition. All mismatching data will be made transparent

Preconditions:

Connect as a user

Have a product, an auxiliary data and a service outputs

| #: | Step actions: | Expected Results: |
|---------------------------------|--|--|
| 1 | Connect to the application as a user Click on 'Discover product' and select a product to display | The product is discovered |
| 2 | Click on 'Display and on-line tools' | The product is displayed |
| 3 | Select the result and ask in a single or distinct tabs | The product is displayed All additional tools are available |
| 4 | Apply a mask on data with a min max value definition | It is possible to define a mask with a min max value definition All mismatching data will be made transparent |
| 5 | Repeat the preceeding steps for an auxiliary data and a service outputs | It is possible to define a mask with a min max value definition All mismatching data will be made transparent |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-Display-0340/T: Visualization of products and service outputs EO4-FCT-Display-0360/T: Application of a mask | |

Test Case EO4WF-43: EO4-Tools-100-Track of an animal[Version : 1]

Summary:

This test is to show that we can :

- Select a maximal duration of the display of the track, for instance
- Display the track only for the last 24 hours
- When several animals are included in the input, the user can select the animal or set of animals to display
- Ask for an animation of the animals along a time bar
- Define the track duration of the animal to optimize the displayed information
- For instance, if a position at a one hour rate over a month is provided for 10 animals, only the last 6 hours of each track are displayed for all animals during the animation.

Preconditions:

Connect as a user

Have a product, an auxiliary data and a service outputs

| #: | Step actions: | Expected Results: |
|---------------------------------|--|---|
| 1 | Connect to the application as a user Click on 'Discover product' and select a product to display | The product is discovered |
| 2 | Click on 'Display and on-line tools' | The product is displayed |
| 3 | Select the result and ask in a single or distinct tabs | The product is displayed All additional tools are available |
| 4 | Select an animal in the input | It is possible to select the animal to display When several animals are included, we can select the set of animals to display |
| 5 | Display the track only for the last 24 hours | It is possible to display the track only for the last 24 hours |
| 6 | Select a maximal duration of the display of the track | It is possible to select a maximal duration of the display of the track |
| 7 | Ask for an animation of the animals along a time bar | It is possible to ask for an animation of the animals along a time bar |
| 8 | Define the track duration of the animal to 6H | It is possible to define the track duration of the animal |
| 9 | Select now a product with at least 10 animals with a position at a one hour rate over a month Display the animals | If a position at a one hour rate over a month is provided for 10 animals, only the last 6 hours of each track are displayed for all animals during the animation. |
| 10 | Repeat the preceeding steps for an auxiliary data and a service outputs | The user can display the track of an animal or set of animals, he can apply filters on the track, he can ask for an animation of the animals |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-Display-0340/T: Visualization of products and service outputs EO4-FCT-Display-0380/T: Displaying the track(s) | |

Test Case EO4WF-44: EO4-Tools-110-Elliptic error [Version : 1]

Summary:

This test is to show that, when the location errors of the positions are provided, the user can :

- Activate the display of the elliptic error along the track
- Apply filters on the track and see the filtered track

Preconditions:

Connect as a user

Have a product, an auxiliary data and a service outputs with a location errors of the positions

| #: | Step actions: | Expected Results: |
|---------------------------------|---|---|
| 1 | Connect to the application as a user Click on 'Discover product' and select a product to display The product must have a location errors of the positions | The product is discovered |
| 2 | Click on 'Display and on-line tools' | The product is displayed |
| 3 | Select the result and ask in a single or distinct tabs | The product is displayed with the location errors of the positions All additional tools are available |
| 4 | Select elliptic error | It is possible to activate the display of the elliptic error along the track |
| 5 | Apply filters on the track | It is possible to apply filters along the track |
| 6 | Visualize the filtered track | It is possible to see the filtered track |
| 7 | Repeat the preceeding steps for an auxiliary data and a service outputs | When the location errors of the positions are provided, it is possible to activate the display of the elliptic error along the track We can also apply filters on the track and see the filtered track |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-Display-0340/T: Visualization of products and service outputs EO4-FCT-Display-0390/T: Activation of the display of the elliptic error | |

Test Case EO4WF-45: EO4-Tools-120-Extraction of the data [Version : 1]

Summary:
 This test is to show that we can also ask for an extraction of the displayed data:
 - along the complete or a part of a track
 - in the area defined by the elliptic errors around the track
 - over an area he creates as a rectangle

Preconditions:
 Connect as a user
 Have a product, an auxiliary data and a service outputs
 Have one with an elliptic error

| #: | Step actions: | Expected Results: |
|---------------------------------|---|--|
| 1 | Connect to the application as a user Click on 'Discover product' and select a product to display The product must have a location errors of the positions | The product is discovered |
| 2 | Click on 'Display and on-line tools' | The product is displayed |
| 3 | Select the result and ask in a single or distinct tabs | The product is displayed with the location errors of the positions All additional tools are available |
| 4 | Display the data | The datas are displayed |
| 5 | Ask for an extraction of the displayed data along the complete track | It is possible to extract the data along the complete track |
| 6 | Ask for an extraction of the displayed data along a part of the track | It is possible to extract the data along a part of the track |
| 7 | Select an area and extract as a rectangle | It is possible to create as rectangle the extracted data |
| 8 | Extract now in the area defined by the elliptic errors | It is possible to extract in the area defined by the elliptic errors around the track |
| 9 | Repeat the preceeding steps for an auxiliary data and a service outputs | The user can ask for an extraction of data values along the track, buy definition of a polyline, within the elliptic error or by definition of an area |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-Display-0340/T: Visualization of products and service outputs EO4-FCT-Display-0400/T: Extraction of displayed data | |

Test Case EO4WF-46: EO4-Tools-130-Generate a report [Version : 1]
Summary:

This test is to show that we can generate a report of a complete or a part of the displayed data. The different formats are :

- netCDF grid with a variable per layer
- CSV export of each variable
- KML/KMZ output of each variable
- PNG/JPEG output of each variable
- PDF report including all the results

Preconditions:

Connect as a user

Have a product, an auxiliary data and a service outputs

| #: | Step actions: | Expected Results: |
|---------------------------------|---|---|
| 1 | Connect to the application as a user Click on 'Discover product' and select a product to display The product must have a location errors of the positions | The product is discovered |
| 2 | Click on 'Display and on-line tools' | The product is displayed |
| 3 | Select the result and ask in a single or distinct tabs | The product is displayed with the location errors of the positions All additional tools are available |
| 4 | Display the data | The data are displayed |
| 5 | Ask for generate a report for the complete data | The report can be generated in the different formats : - netCDF grid with a variable per layer - CSV export of each variable - KML/KMZ output of each variable - PNG/JPEG output of each variable - PDF report including all the results |
| 6 | Save the export in each format | The reports are consistent |
| 7 | Ask for generate a report for a part of the displayed data (see the test EO4-Tools-120 to how extract data) | The report can be generated even for a part of the displayed data |
| 8 | Repeat the preceeding steps for an auxiliary data and a service outputs | We can generate a report of a complete or a part of the displayed data in different formats : netCDF, CSV, KML/KMZ, PNG/JPEG, PDF |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-Display-0340/T: Visualization of products and service outputs EO4-FCT-Display-0410/T: Generation of reports | |

Test Case EO4WF-47: EO4-Tools-140-Generic tools [Version : 1]
Summary:

This test is to show that we can use a generic tools to :

- Measure the distance between 2 locations, or to an area
- Generate an area from a pattern created thanks to a wizard tool and compute a surface of this area

Preconditions:

Connect as a user

Have a product, an auxiliary data and a service outputs

| #: | Step actions: | Expected Results: |
|---------------------------------|---|---|
| 1 | Connect to the application as a user Click on 'Discover product' and select a product to display | The product is discovered |
| 2 | Click on 'Display and on-line tools' | The product is displayed |
| 3 | Select the result and ask in a single or distinct tabs | The product is displayed All additional tools are available |
| 4 | Apply a generic tool to measure the distance between two locations | It is possible to measure the distance between two locations |
| 5 | Measure the distance to an area | It is possible to measure the distance to an area |
| 6 | Generate an area | It is possible to generate an area from a pattern created thanks to a wizard tool |
| 7 | Compute a surface of this area | It is possible to compute a surface of this area |
| 8 | Repeat the preceeding steps for an auxiliary data and a service outputs | It is possible to apply generic tools to : - Measure the distance between 2 locations, or to an area - Generate an area from a pattern created thanks to a wizard tool and compute a surface of this area |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-Display-0340/T: Visualization of products and service outputs EO4-FCT-Display-0420/T: Compute a distance | |

Test Case EO4WF-48: EO4-Tools-150-Thematic tools [Version : 1]

Summary:

This test is to show that we can use a thematic tools to :

- Determine convergence zones/frontal zones for the displayed layer
- Determine front for the displayed layer
- Filter the input locations on line thanks to the different track processing services

Preconditions:

Connect as a user

Have a product, an auxiliary data and a service outputs

| #: | Step actions: | Expected Results: |
|---------------------------------|---|---|
| 1 | Connect to the application as a user Click on 'Discover product' and select a product to display | The product is discovered |
| 2 | Click on 'Display and on-line tools' | The product is displayed |
| 3 | Select the result and ask in a single or distinct tabs | The product is displayed All additional tools are available |
| 4 | Determine convergence zones/frontal zones for the displayed layer | It is possible to determine convergence zones/frontal zones for the displayed layer |
| 5 | Determine front for the displayed layer | It is possible to determine front for the displayed layer |
| 6 | Filter the input locations on line thanks to the different track processing services | It is possible to filter the input locations on line thanks to the different track processing services |
| 7 | Repeat the preceding steps for an auxiliary data and a service outputs | It is possible to apply a thematic tools to : - Determine convergence zones/frontal zones for the displayed layer - Determine front for the displayed layer - Filter the input locations on line thanks to the different track processing services |
| Execution type: | Manual | |
| Estimated exec. duration (min): | | |
| Requirements | EO4-FCT-Display-0340/T: Visualization of products and service outputs EO4-FCT-Display-0430/T: Identify fronts and convergences | |

4 Conclusion

This validation and evaluation plan describes all testcases required to check that the EO4wildlife is compliant with the requirements defined by the use case leaders in the D1.1 Use Case scenarios v1 [1].

These testcases were designed to take into account the not only the technical validation of the platform (performances, management of the users, initialization of the data in the system) but also the evaluation of the service by end-users.

The testcases description will be refined after the final implementation of the services to detail the buttons to select in the user interface or to precise the expected delays of execution of steps for instance.

References

- [1] Garance Weller (v1.1): D1.1¹ Use Case scenarios v1 v1.1. Deliverable of the EO4wildlife project, 2016
- [2] Anne Haugommard (v1.0): D2.1 System architecture and operational scenarios v1 v1.0. Deliverable of the EO4wildlife project, 2016

¹ D1.1 is the applicable document from which were extracted all the requirements to cover by tests.

Annex 1: Traceability matrix

The following matrix shows the traceability between the requirement and the test case:

| Requirement | Test case | Comment |
|-------------------------|--|---------|
| EO4-FCT-GEN-0010/T | EO4-GEN-010-Connection to the EO4wildlife system | |
| EO4-FCT-GEN-0020/T | EO4-GEN-020-Access authorization EO4-Administration-020-Modify the attributes of a user | |
| EO4-FCT-GEN-0030/T | EO4-Product-010-Creation of the metadata product from scratch EO4-Product-020-Creation of the metadata product from an existing catalogue EO4-Service-010-Creation of a service metadata | |
| EO4-FCT-GEN-0040/T | EO4-Administration-010-Create a user EO4-Product-010-Creation of the metadata product from scratch EO4-Product-020-Creation of the metadata product from an existing catalogue EO4-Service-010-Creation of a service metadata EO4-Service-040-Upload a service EO4-Product-060- Extract a product | |
| EO4-FCT-DescProd-0050/T | EO4-Product-010-Creation of the metadata product from scratch EO4-Product-020-Creation of the metadata product from an existing catalogue | |
| EO4-FCT-DescProd-0060/T | EO4-Product-010-Creation of the metadata product from scratch EO4-Product-020-Creation of the metadata product from an existing catalogue | |
| EO4-FCT-DescProd-0070/T | EO4-Product-010-Creation of the metadata product from scratch EO4-Product-020-Creation of the metadata product from an existing catalogue | |
| EO4-FCT-DescProd-0080/T | EO4-Product-030-Modification of the metadata product | |
| EO4-FCT-DescProd-0090/T | EO4-Product-040-Delete of the metadata product | |
| EO4-FCT-DescProd-0100/T | EO4-Product-030-Modification of the metadata product | |
| EO4-FCT-DescServ-0110/T | EO4-Service-010-Creation of a service metadata | |
| EO4-FCT-DescServ-0120/T | EO4-Service-010-Creation of a service metadata | |
| EO4-FCT-DescServ-0130/T | EO4-Service-020-Modification of the service metadata | |
| EO4-FCT-DescServ-0140/T | EO4-Service-030-Delete of the service metadata | |
| EO4-FCT-UplServ-0160/T | EO4-Service-040-Upload a service | |
| EO4-FCT-DiscProd-0170/T | EO4-Product-050-Discover a product | |
| EO4-FCT-DiscProd-0180/T | EO4-Product-050-Discover a product | |
| EO4-FCT-DiscProd-0190/T | EO4-Product-060- Extract a product | |
| EO4-FCT-DiscProd-0200/T | EO4-Product-060- Extract a product | |
| EO4-FCT-DiscServ-0210/T | EO4-Service-060-Discover a service | |
| EO4-FCT-DiscServ-0220/T | EO4-Service-060-Discover a service | |
| EO4-FCT-DiscServ-0230/T | EO4-Service-070-Save a service | |
| EO4-FCT-RunServ-0240/T | EO4-Service-110-Run a service | |
| EO4-FCT-RunServ-0250/T | EO4-Service-090-Save a new service without errors EO4-Service-100-Save a new service with errors EO4-Service-110-Run a service | |
| EO4-FCT-RunServ-0260/T | EO4-Service-090-Save a new service without errors EO4-Service-100-Save a new service with errors | |
| EO4-FCT-RunServ-0270/T | EO4-Service-090-Save a new service without errors | |
| EO4-FCT-RunServ-0280/T | EO4-Service-110-Run a service | |
| EO4-FCT-RunServ-0290/T | EO4-Service-110-Run a service | |
| EO4-FCT-RunServ-0300/T | EO4-Service-120-Reuse a workflow definition | |

| Requirement | Test case | Comment |
|-------------------------|---|---------|
| EO4-FCT-RunServ-0310/T | EO4-Service-110-Run a service | |
| EO4-FCT-RunServ-0320/T | EO4-Service-080-Connection from a thematic platform | |
| EO4-PRF-RunServ-0330/T | EO4-Service-110-Run a service | |
| EO4-FCT-Display-0340/T | EO4-Tools-010-Visualization EO4-Tools-020-Colour map EO4-Tools-030-Adjust the min-max value EO4-Tools-040-Linear or logarithmic scale EO4-Tools-050-Transparency level EO4-Tools-060-Location EO4-Tools-070-Draw in 3D EO4-Tools-080-Draw in 2D EO4-Tools-090-Define a mask EO4-Tools-100-Track of an animal EO4-Tools-110-Elliptic error EO4-Tools-120-Extraction of the data EO4-Tools-130-Generate a report EO4-Tools-140-Generic tools EO4-Tools-150-Thematic tools | |
| EO4-FCT-Display-0350/T | EO4-Tools-010-Visualization EO4-Tools-020-Colour map EO4-Tools-030-Adjust the min-max value EO4-Tools-040-Linear or logarithmic scale EO4-Tools-050-Transparency level | |
| EO4-FCT-Display-0360/T | EO4-Tools-010-Visualization EO4-Tools-090-Define a mask | |
| EO4-FCT-Display-0370/T | EO4-Tools-010-Visualization EO4-Tools-060-Location EO4-Tools-070-Draw in 3D EO4-Tools-080-Draw in 2D | |
| EO4-FCT-Display-0380/T | EO4-Tools-100-Track of an animal | |
| EO4-FCT-Display-0390/T | EO4-Tools-110-Elliptic error | |
| EO4-FCT-Display-0400/T | EO4-Tools-120-Extraction of the data | |
| EO4-FCT-Display-0410/T | EO4-Tools-130-Generate a report | |
| EO4-FCT-Display-0420/T | EO4-Tools-140-Generic tools | |
| EO4-FCT-Display-0430/T | EO4-Tools-150-Thematic tools | |
| EO4-FCT-ValMeta-0440/T | EO4-Administration-040-Validate a metadata product EO4-Administration-050-Validate a service metadata | |
| EO4-FCT-ValMeta-0450/T | EO4-Administration-040-Validate a metadata product EO4-Administration-050-Validate a service metadata | |
| EO4-FCT-InvMeta-0460/T | EO4-Administration-060-Invalidate a metadata product EO4-Administration-070-Invalidate a service metadata | |
| EO4-FCT-InvMeta-0470/T | EO4-Administration-080-Test the uploaded service | |
| EO4-FCT-manUser-0480/T | EO4-Administration-010-Create a user EO4-Administration-020-Modify the attributes of a user EO4-Administration-030-Delete a user | |
| EO4-FCT-InvMeta-0490/T | EO4-Administration-090-Invalidate a service | |
| EO4-OPE-DescServ-0150/A | | |