
# D7.9 - Final Integration test report of the demonstrator

| **Deliverable D7.9** | | |
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| **Dissemination level** | | |
| PU | Public, fully open, e.g. web | |
| CO | Confidential, restricted under conditions set out in Model Grant Agreement | CO |
| CI | Classified, information as referred to in Commission Decision 2001/844/EC | |



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# Executive Summary

Deliverable 7.9 reports the integration test results for the main components of the final version of the e-VITA Platform (demonstrator). The tests are focused on the integration of the key components of the platform, validating the different interfaces (API) among them. In particular, it has been tested the APIs for the interaction with the devices and coaching system that will exchange information with the platform, and the ones covering the communication among internal key components in the e-VITA platform (based on the Digital Enabler Platform). The tests also validate the main security APIs related to authentication and authorisation for users and devices.

The deliverable in the chapter one introduces the components to be tested and described the test methodology. The chapter 2 reports a set of tables that includes the test information and results.

It must be considered that this document describes the natural evolution of the platform components, compared to the previous version of the document, the D7.3 “First Integration test report – Prototype" (e-VITA, 2022).

It reports and describes the tests carried out on the services exposed by the platform: some of them are updated compared to the previous version while others are completely new implemented in the current and final version of the e-VITA platform.

The main changes concern the services regarding the integration of new components such as the FIWARE Perseo Context-Aware CEP, the Social Platform, the Data Fusion component and the Emotion Detection system. In addition, new tests are related to new features provided by the platform such as the generation and visualization of Leaderboards, Reminders and Notifications, Personal information of the users and different functionalities reserved to platform administrators.



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Disclaimer



E-VITA – European-Japanese Virtual Coach for Smart Ageing

E-VITA (EU PROJECT NUMBER 101016453)

[Number and title of work-package] WP7 – Integration, Tools & Services

Document title: D7.9 - Final Integration test report of the Demonstrator

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# Acronyms and Abbreviations

| Acronym | Description |
|---|---|
| AMQP | Advanced Message Queuing Protocol |
| API | Application Programming Interface |
| REST | Representational State Transfer |
| CMS | Content Management System |
| DE | Digital Enabler |
| HTTP | Hypertext Transfer Protocol |
| JSON | JavaScript Object Notation |
| MQTT | Message Queue Telemetry Transport |
| UML | Unified Modeling Language |
| NGSI | Next Generation Service Interfaces |
| CB | Context Broker |
| CEP | Complex Event Processing |



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# 1 Tested components

The test covered in this document are related to the most relevant interfaces of the main components of the e-VITA platform. As described in D7.4 e-VITA platform is based on the Digital Enabler, an open source suite developed by Engineering, improved and extended with new components and capabilities to fit e-VITA requirements. The tests can be grouped in the following categories:

- Tests that validate identification process and user management
- Tests that validate the correct registration and communication with the devices
- Tests that validate the connection with device cloud services
- Tests that validate the data provisioning and storage
- Tests that validate the interaction with Dialog Manager

Figure 1 is the UML component diagram of the e-VITA platform. The picture shows only the main components and the interfaces covered by the integration tests included in this deliverable.

Each interface of the components presented in the diagram correspond to a real API implementation (e.g. http REST API) provided by e-VITA, but, for the sake of simplicity, the diagram shows a logical vision where the interfaces names are related to their functionalities (e.g., *getUser*, *deleteDevice* etc.) rather than their real implementation.



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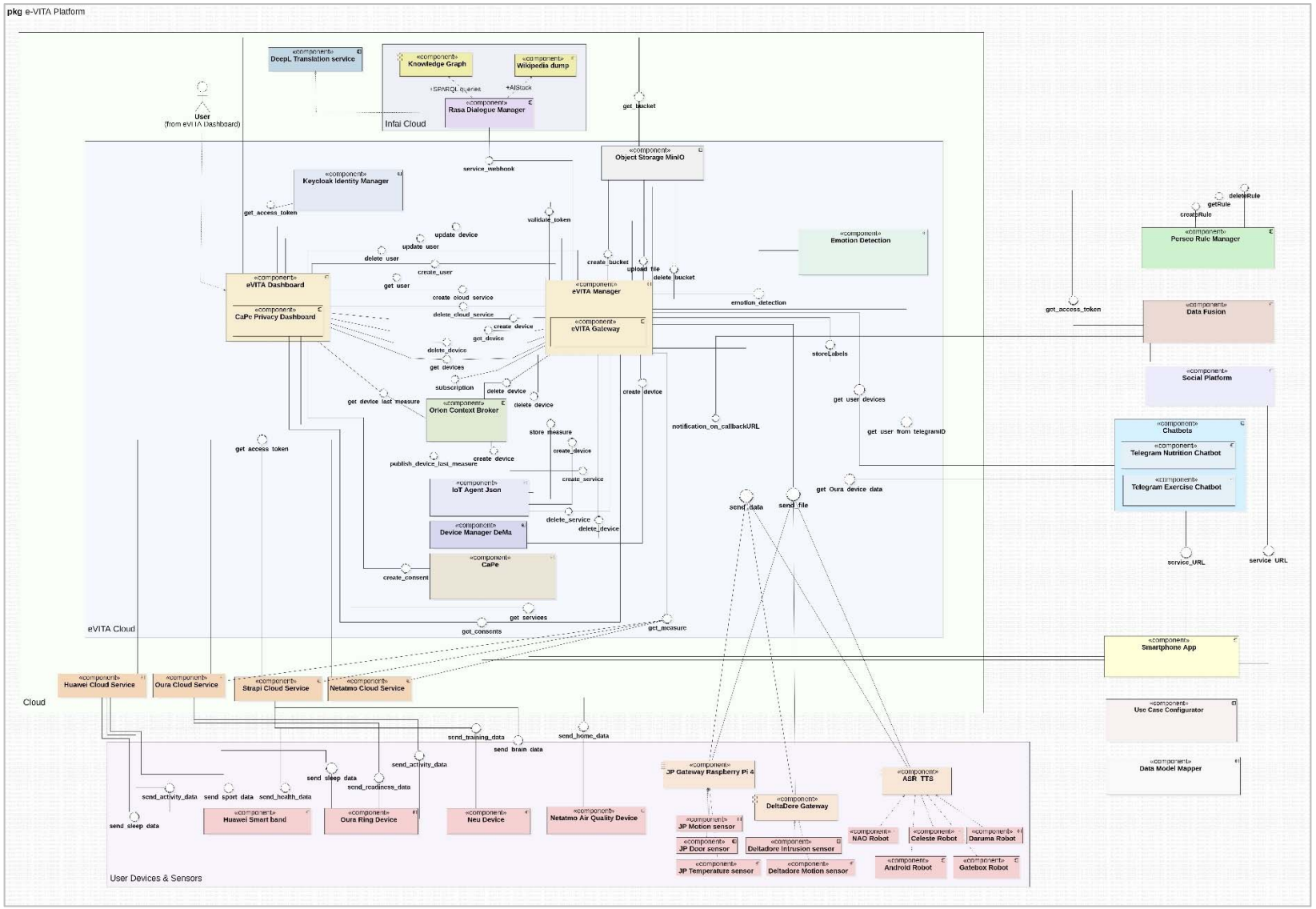


*Figure 1: e-VITA Platform UML component diagram*



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The involved components have already been defined in detail in D7.4 (e-VITA, 2022), but a brief description is presented below. Also, additional detail about all devices can be found in D4.8 (e-VITA, 2023) and in D4.6 (e-VITA, 2023):

**Devices**

- **Neu device:** It is a wearable device that measures brain signals for cognitive training. NEU is connected to a mobile app via Bluetooth; raw data is processed inside the mobile app and the elaborated data (record of training results) is sent and stored in a cloud platform based on Strapi open-source CMS. Data can be therefore accessed from the cloud via Strapi API by registered users on the cloud platform. The Neu is a single device but is logically divided into two components, one to retrieve the brain measurements and the other to obtain the training results of a single user.
- **Netatmo Air quality sensor:** it is a sensor for smart indoor air quality monitor. Specifically, it measures the levels of CO2, humidity, temperature, noise level, pressure and provides a parameter, the air quality monitor health index, that indicates the air qualitative state giving information about the health of the air based on these measured parameters. The collected measurements are stored in the Netatmo cloud platform, and it is possible to access the measures and device data via the specific Netatmo API by a user that owns a Netatmo device and that has registered on the cloud platform.
- **Japanese sensors:** These are three types of sensors supplied by the Japanese partners of the e-VITA project for detecting the human movement, temperature/humidity and state (opening/closing) of a door. These sensors are compatible with the EnOcean Smart Home & Smart Building protocol.
- **Deltadore sensors:** Deltadore has a full range of technical sensors, visualization products and piloting tools on offer and those considered within the e-VITA project are a gateway and smart home sensors (motion and intrusion sensors) in which the gateway interacts with the sensors via X3D protocol and it also supports wifi for internet connection. Sensor data are stored in the Deltadore cloud platform and there is a mobile app that can be used to see these data.
- **NAO robot:** Nao is an autonomous, programmable humanoid robot. This type of robots has been used for research and education purposes in several academic institutions worldwide and it is available as a research robot to teach programming and conduct research into human-robot interactions. His assistive function is amplified by social bonding. In e-VITA the social element is used in combination with a directed coaching service and takes on a complementary role to human coaches.
- **Gatebox robot:** it is a virtual home robot in the form of a projected 3D character living inside a glass tube. Within it, a character is projected who can partake in conversations and be hooked up to home network in order to automate certain tasks. In the e-VITA project, the virtual character takes on the role of a coach to encourage older adults to do certain activities.
- **Android robot:** Android robots are social robots which interact with human for virtual coaching. The appearance of an android highly resembles human: they are full sized humanoids with complex facial movements and realistic appearance. In the e-VITA project, the robot will be controlled based on the dialogue management system on the platform:



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speech of the user will be recorded by the microphone and sent to a cloud-based speech recognizer for speech recognition.

- **Huawei device** (HUAWEI, 2023)**:** The Huawei wearable device made available to users and integrated into the e-VITA platform is the Huawei Smart band 7. It is a wearable device (digital watch) that supports automatic and continuous monitoring of the basic user movement parameters such as steps, the distance travelled, the speed. In addition, it records more specific parameters and supports heart rate monitoring, checking the user's health parameters such as blood oxygen saturation and heart rate. It provides information related to sport and fitness by offering different training modes to support the user in sporting activities and stress monitoring. In addition, it provides useful sleep analysis parameters that are important for monitoring the user's health condition.

**Device Clouds**

- **Netatmo Cloud Service** (Netatmo, 2023)**:** it is a service based on a set of APIs that enable third party apps and services to interact with Netatmo products. The cloud service allows users to register their Netatmo devices and it is therefore used to retrieve the data and measurements detected by the sensors.
- **Strapi Cloud Service** (Strapi CMS, 2023)**:** it is a CMS based on a set of APIs that, in the specific context of this project, enable third party apps and services to interact with Neu devices. The platform administrator can register a new user and once his data has been retrieved from a Neu device, is stored within the platform. These measurements are then retrieved through the APIs provided by Strapi.
- **Huawei Cloud Service** (HUAWEI, 2023)**:** The connection between the Huawei device and the e-VITA platform is possible because the collected measurements are sent, via smartphone connected to the device, to the proprietary Huawei cloud platform and it is possible to access the measures and device data via the specific Huawei APIs using Huawei user credentials. e-VITA can retrieve device data connecting to Huawei cloud API using valid user credential via OAuth2 protocol (OAuth, 2023).

**e-VITA platform components**

- **Keycloak Identity Provider** (Red Hat, 2023): the tool is an Identity and Access management tool used within the e-VITA project for the management and authentication of users, specifically for authentication and authorization features. Keycloak provides customizable user interfaces for login, registration, administration, account management and it is also possible to delegate authentication to third party identity providers.
- **e-VITA Manager:** it is the key component of the e-VITA platform, developed within the project. Through a set of appropriately implemented connectors, it allows the correct integration of the IoT gateways, wearables, devices and robots sensor data. The component exposes a set of REST APIs that can be consumed by any client. It works as a middleware component to interact with the Device Manager of the Digital Enabler.



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- **e-VITA Frontend**: it is the main user interface used by the e-VITA platform user. It includes functionalities to register and configure devices to manage user information, and provides dashboard to monitor user data coming from devices.
- **Device Manager (DEMA)**: the tool is part of the Digital Enabler (DE) ecosystem platform and it is a component intended for easily manage sensors and IoT devices. Through its interfaces, platform administrator can easily view information relating to their registered devices such as the device name and organization, the protocol and data format used, the device attributes and its localization.
- **IoT Agent JSON** (FIWARE, 2023): This component, is an Internet of Things Agent for a JSON based protocol (with AMQP, HTTP and MQTT transports). This IoT Agent is designed to be a bridge between JSON and the NGSI interface of a context broker (i.e., FIWARE Orion Context Broker). This protocol is based on simple single level JSON Objects codifying (attribute, value) pairs. This protocol is also aimed for simplicity and ease of use, for those scenarios where there are no hard resource constraints.
- **FIWARE Orion Context Broker** (FIWARE, 2023)**:** the component is an NGSI-v2 (FIWARE, 2023) server implementation to manage context information in e-VITA architecture and its availability including updates, queries, registrations and subscriptions. In the e-VITA platform, the Context Broker is used to provide the harmonized raw data coming from the devices via publish-subscribe APIs.
- **FIWARE Perseo Context-Aware CEP** (FIWARE, 2023)**:** it is a FIWARE component designed to be fully NGSI-v2-compliant and the context broker tested with it and officially supported is Orion Context Broker. Perseo is an Esper-based Complex Event Processing (CEP) software that uses NGSI-v2 as the communication protocol for events. Perseo is able to seamlessly and jointly work with *context brokers*. The Perseo component interacts with an Orion Context Broker by listening to events coming from context information to identify patterns described by rules, in order to immediately react upon them by triggering actions. Perseo is used within the e-VITA platform in combination with the Orion Context Broker of the platform in the following way: exploiting the notifications mechanism of the Context Broker, the platform acts as a client that instructs the Orion CB to notify Perseo of the changes in the entities of interest. Rules to the CORE Rule Engine are easily managed by specific technical users of e-VITA by using the Perseo's Rule API via the e-VITA dashboard web interface. These rules will identify patterns that will trigger actions with Orion to create or update entities.
- **Multi-Cloud Object Storage – MinIO** (MINIO, 2023): the e-VITA platform has to support different typologies of data storage including Object Storage, that can be used to store unstructured data. For this purpose, this object storage is chosen which is high-performance and API compatible with Amazon S3 cloud storage service. It is an open-source distributed object storage server and the only object storage suite available on every public cloud. In particular, as part of the project a Bucket in MinIO, which is an entity used to organize objects, is associated with each user registered on the e-VITA platform, containing the historical data of his registered devices.
- **RASA Open-Source Framework** (Rasa Technologies, 2023): the tool is an open-source machine learning framework to automate text- and voice-based conversations, to create chatbots and voice assistants. It is the dialogue manager in e-VITA platform and it is the



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component that enables interactions with the user, capable of having layered conversations, suitably processing input messages from the user and producing output messages based on the specific context.

- **Social Platform:** The main purpose of Social Platform is to establish bridge between youth and elderly people by creating social platform in which different range of activities (e.g., cultural, sport, cooking, repairing, sewing, gardening, etc.) and as well as volunteering activities and paid small services such as offering help to each other are featured. Social platform application is maintained based on the countries and different communities (more specifically the local location and helping community directly around the primary end-users) to offer user services in the interest of the area. More information and features of the app can be found in Deliverable 7.8 (e-VITA, 2022).
- **Emotion detection system:** The Emotion Detection System is a standalone component that, based on recorded speech data, allows the detection and classification of frequently used basic emotions during the interaction between coaching system and the older adults.
  It is a Python software component that has been suitably integrated within the e-VITA platform. Its functionality of detecting emotions from an audio file has been conveniently exposed via a REST API. It is called by the e-VITA Manager component or can be also called in the same way by external components, whenever there is the need to associate specific emotions to an audio file.
- **Data Fusion:** Data Fusion is a component that provides the situation assessment and environmental data fusion. The component includes various domains of applications such as user's localization, environmental conditions and states inside his/her home environment and potentially alarm detection (distress, falls, etc.). The Data Fusion component also targets to provide a semantic input inferred from the user's state or situation detected or identified, within his/her home environment and outside of her (roaming), towards other tasks devoted to the Knowledge Graphs and the Dialog Manager. For the e-VITA project, all sensors information is combined to make inference of simple situations of the users in their environment, for instance postures, localization in the home and the users' physiological states. The data fusion module has the objective to produce data minimized semantic information on the user's status or situation within his/her home environment but also outside, in a seamless way. Additional details about the component can be found in D5.1 (e-VITA, 2022) and D5.2 (e-VITA, 2023).



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# 2 Tests

This section of the document includes a report of all integration tests performed on the e-VITA Platform. The specific type of software testing performed is the one in which the different units, modules or components of the software application are tested as a combined entity, to verify their proper functioning and correct integration.

From technology point of view, the chosen framework for the implementation and execution of the integration tests is Mocha (MOCHA, 2023) an open-source and feature-rich JavaScript test framework running on Node.js and in the browser, for making asynchronous tests. Mocha tests run serially, allowing for flexible and accurate reporting, while mapping uncaught exceptions to the correct test cases. Mocha provides functions that execute in a specific order and logs the results in the terminal window. It also cleans the state of the software being tested to ensure that test cases run independently of each other.

The tests performed have been divided into different categories, which represent the specific logical or physical component tested. Each category can include one or more tests whose information is reported in a table; each of them includes the following fields:

- **ID**: an integer value that uniquely identifies the test.
- **Title**: the title of the test.
- **Description**: an explanation of the specific test that describes its purpose (what it intends to verify) and details on how this check was performed.
- **Tested Interfaces:** the field contains one or more software components and the related interfaces exposed that is considered in the specific test.
- **Input parameters:** the input parameters required for the correct execution of the test (which correspond to the parameters of the HTTP request).
- **Preconditions:** a set of initial requirements that the test expects to be satisfied in order to be performed correctly. In the case of this requirement is an output of a previous test, the test identification number is reported.
- **Expected output:** it is the HTTP status code that is expected to be obtained in order to consider the specific test successfully passed. For a description of the status code obtained, see Table 1.
- **Test execution report:** this field contains exactly the output string of the test function.
- **Test result:** it is the final result of the test which can be one of the following two values: *passed* or *failed*.

Table 1 includes a list and description of the most common HTTP status codes; standard response codes indicate whether a specific HTTP request has been successfully completed.

The codes help to identify the cause of the problem when a web resource does not load properly and each test performed and reported in the next chapter includes the *Expected Output* field which contains one of these codes.

Specifically, the Table 1 divides logically the codes into three main categories, since the status code element in a server response is a 3-digit integer where the first defines the specific class of response.



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| HTTP Status Codes | |
|---|---|
| Level 200 - Success | |
| 200 OK | Standard response for successful HTTP requests. In a GET request, the response will contain an entity corresponding to the requested resource. In a POST request, the response will contain an entity describing or containing the result of the action. |
| 201 Created | The request has been fulfilled, resulting in the creation of a new resource. |
| 203 Non-Authoritative Information | The server is a transforming proxy (e.g., a Web accelerator) that received a 200 OK from its origin but is returning a modified version of the origin's response. |
| 204 No Content | The server successfully processed the request and is not returning any content. |
| Level 400 – Client Error | |
| 400 Bad Request | The server cannot or will not process the request due to an apparent client error (e.g., malformed request syntax, size too large, invalid request message framing, or deceptive request routing). |
| 401 Unauthorized | Similar to 403 Forbidden, but specifically for use when authentication is required and has failed or has not yet been provided. 401 semantically means "unauthorised", the user does not have valid authentication credentials for the target resource. |
| 403 Forbidden | The request contained valid data and was understood by the server, but the server is refusing action. This may be due to the user not having the necessary permissions for a resource or needing an account of some sort, or attempting a prohibited action. |
| 404 Not Found | The requested resource could not be found but may be available in the future. Subsequent requests by the client are permissible. |
| 405 Method Not Allowed | A request method is not supported for the requested resource; for example, a GET request on a form that requires data to be presented via POST, or a PUT request on a read-only resource. |
| Level 500 – Server Error | |
| 500 Internal Server Error | A generic error message, given when an unexpected condition was encountered and no more specific message is suitable. |
| 502 Bad Gateway | The server was acting as a gateway or proxy and received an invalid response from the upstream server. |
| 503 Service Unavailable | The server cannot handle the request (because it is overloaded or down for maintenance). Generally, this is a temporary state. |
| 504 Gateway Timeout | The server was acting as a gateway or proxy and did not receive a timely response from the upstream server. |



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*Table 1: Description of the most common HTTP status codes*

## 2.1 Identification and authorization (Keycloak)

This section of the document contains the integration tests that verify the correct creation of an access Token relating to a User, in the Keycloak Identity Manager. The access tokens generated at this stage, will authorize the subsequent API requests.

| **Identity Manager Test** | |
|---|---|
| ID | 1 |
| Title | Password Grant type Token creation |
| Description | The test checks that the creation of an access token related to a User, previously registered in the Keycloak instance of the e-VITA platform, is successful.<br><br>The only precondition is that the User has already previously registered in the Keycloack tool, through the form provided by the tool dedicated page. |
| Tested Interfaces | Keycloak Identity Manager - *createToken* |
| Input Parameters | ○ Client ID<br>○ Client Secret<br>○ Username<br>○ Password<br>○ Grant Type |
| Preconditions | Existence of the specific User registered in Keycloak. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- KEYCLOACK TOKEN successfully created<br><br>√ 1) KEYCLOAK TOKEN creation (298ms) |
| Test Result | Passed |



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| Identity Manager Test | |
|---|---|
| ID | 2 |
| Title | Client Credentials Grant type Token creation |
| Description | The test checks that the creation of an access token related to an external Client application, previously registered in the Keycloak instance of the e-VITA platform in terms of a clientID and a clientSecret, is successful.<br><br>The only precondition is that the Client has already previously registered in Keycloack. |
| Tested Interfaces | Keycloak Identity Manager - *createToken* |
| Input Parameters | ○ Client ID<br>○ Client Secret<br>○ Grant Type |
| Preconditions | Existence of the specific User registered in Keycloak. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- KEYCLOACK TOKEN successfully created<br>√ 2) KEYCLOAK TOKEN creation (298ms) |
| Test Result | Passed |

| Identity Manager Test | |
|---|---|
| ID | 3 |
| Title | Token creation – Attributes Validation (User credentials) |
| Description | The test checks that the creation of an access token related to a User, previously registered in the Keycloak instance of the e-VITA platform, fails in case of incorrect user credentials.<br><br>The only precondition is that the User has already previously registered in the Keycloack tool, through the form provided by the tool dedicated page.<br><br>Being an incorrect input (the User credentials in this case) the token is not generated. |
| Tested Interfaces | Keycloak Identity Manager - *createToken* |



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| | |
|---|---|
| | |
| **Input Parameters** | ○ Client ID<br>○ Client Secret<br>○ Username<br>○ Password<br>○ Grant Type |
| **Preconditions** | Existence of the specific User in Keycloak (upon registration by the User). |
| **Expected Output** | **405** Status Code |
| **Test Execution Report** | - STATUS CODE: 405<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- ATTRIBUTES VALIDATION (wrong credentials) correctly performed<br>√ 3) KEYCLOAK TOKEN creation - ATTRIBUTES VALIDATION (wrong credentials) (129ms) |
| **Test Result** | Passed |



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## 2.2 User management

This section of the document contains the integration tests that verify the correct creation and management of a new User in the e-VITA platform. The tests therefore verify the correct cooperation between the various software components involved in this phase.

The tests of this specific section concern the registration of a new user, the obtaining of his identity and his information once created and the assignment of a user to another having one of the following Keycloak roles: *human_coach, care_giver* or *study_center* user. Users who have one of these roles can manage the personal data of users assigned to them.

| **User management Test** | |
|---|---|
| ID | 4 |
| Title | User creation |
| Description | The test checks that the creation of a User in the e-VITA platform, is successful. The User, by entering the information relating to his Country and his Language, completes the user information that he had previously created in the Keycloak tool. For this reason, the only precondition is that this User has already previously logged into Keycloack.<br><br>The existence of a new user in the e-VITA platform also provides the creation of a Bucket in the Object Storage (MinIO) associated with that User. The Bucket name will coincide with the User Id; it will contain the historical data of all devices registered by the User.<br><br>Furthermore, when creating the user, in addition to the creation of the associated bucket in MinIO, a process is started that daily creates a CSV file with the measurements of the devices associated with the user collected during the day (if any) and it inserts this file in the bucket.<br><br>The test displays in output the User Id concerned. |
| Tested Interfaces | Keycloak Identity Manager - *validateToken*<br><br>e-VITA Manager – *createUser*<br><br>Object Storage MinIO - *createBuket*<br><br>Object Storage MinIO - *uploadFile* |
| Input Parameters | ○ User Country<br>○ User Language |
| Preconditions | Existence of an Access Token specific for the User in Keycloak. |
| Expected Output | **200** Status Code |



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| | |
|---|---|
| | |
| Test Execution Report | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- USER ID of the created user: b554033b-1f4a-465c-b1f6-4b80ff7ebb52<br>√ 4) USER creation (1176ms) |
| Test Result | Passed |

| **User management Test** | |
|---|---|
| ID | 5 |
| Title | User retrieving |
| Description | The test checks that the e-VITA User previously created is correctly returned.<br>The User can be obtained, therefore, only if he has previously been correctly registered and if in possession of the Keycloack access token related to it.<br>The test displays in output the related User Id. |
| Tested Interfaces | Keycloak Identity Manager - *validateToken*<br>e-VITA Manager - *getUser* |
| Input Parameters | None |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br>Existence of the specific User in the e-VITA Manager Platform. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>-USER ID retrieved: b554033b-1f4a-465c-b1f6-4b80ff7ebb52<br>√ 5) USER retrieving (112ms) |
| Test Result | Passed |



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| User management Test | |
|---|---|
| ID | 6 |
| Title | User retrieving - Attributes Validation (Keycloack Token) |
| Description | The test checks that the e-VITA User previously created, is not returned in case of wrong (or not present) Keycloack access token.<br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - *validateToken*<br>e-VITA Manager - *getUser* |
| Input Parameters | None |
| Preconditions | Non-existence of an Access Token specific for the User in Keycloak (or wrong Token);<br>Existence of the specific User in the e-VITA Manager Platform. |
| Expected Output | **401** Status Code |
| Test Execution Report | - STATUS CODE: 401<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- ATTRIBUTES VALIDATION (KEYCLOACK TOKEN) correctly performed<br>- USER information NOT obtainable<br>√ 6) USER retrieving - ATTRIBUTES VALIDATION (KEYCLOACK TOKEN) (145ms) |
| Test Result | Passed |

| User management Test | |
|---|---|
| ID | 7 |
| Title | USER retrieving - of all registered users managed by the logged user (for human_coach, care_giver or study_center user) |



Ministry of Internal Affairs and Communications, JAPAN

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| | |
|---|---|
| **Description** | The test checks that the list of users associated with the e-VITA logged user is correctly returned. It is not returned in case of wrong (or not present) Keycloack access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| **Tested Interfaces** | Keycloak Identity Manager - *validateToken*<br><br>e-VITA Manager - *getUserManagement* |
| **Input Parameters** | None |
| **Preconditions** | Non-existence of an Access Token specific for the User in Keycloak (or wrong Token).<br><br>Existence of the specific User in the e-VITA Manager Platform. |
| **Expected Output** | **200** Status Code |
| **Test Execution Report** | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>√ 7) USER retrieving - of all registered users managed by the logged user (for human_coach, care_giver or study_center) (134ms) |
| **Test Result** | Passed |



Ministry of Internal Affairs and Communications, JAPAN

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## 2.3 Device registration and communication

This section of the document contains the integration tests that verify the correct creation and management of a new Device in e-VITA, considering all the types of Devices supported by the platform. In addition, the tests in this section check that the communication between the e-VITA platform and the Device Manager has occurred correctly by verifying that all the Devices previously registered are actually present in the DeMa component and also that a device can send a measurement correctly and successfully. The tests therefore verify the correct cooperation between the different software components involved in this phase.

| **Device Management Test** | |
|---|---|
| ID | 8 |
| Title | GATEBOX Type Device creation |
| Description | The test checks that the registration of a new Device in the e-VITA platform is successfully performed. In particular, the test concerns the GATEBOX device type.<br>The creation of a new device presupposes the existence of a User in Keycloack and consequently also in the e-VITA platform, as the newly created device will be associated with the logged user that registered it.<br>In the case of this specific type of device, which is a robot, the test verifies the correct registration of the device within the e-VITA Manager, as it is not also registered in the Device Manager tool.<br>The creation of the device takes as input the type (GATEBOX), a source Id and a Name. The frequency parameter is taken into consideration only for devices connected to a Cloud Service, as it represents the *frequency* with which the measurements are read by the specific Cloud Service. |
| Tested Interfaces | Keycloak Identity Manager – *validateToken*<br>e-VITA Manager – *createDevice* |
| Input Parameters | ○ Type<br>○ Source Device ID<br>○ Device Name<br>○ Frequency |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br>Existence of the specific User in the e-VITA Manager Platform. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- GATEBOX device correctly registered<br>√ 8) DEVICE creation - GATEBOX TYPE (217ms) |
| Test Result | Passed |



Ministry of Internal Affairs and Communications, JAPAN

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| Device Management Test | |
|---|---|
| ID | 9 |
| Title | NAO_ROBOT Type Device creation |
| Description | The test checks that the registration of a new Device in the e-VITA platform, is successful. In particular, the test concerns the NAO_ROBOT device type.<br><br>The creation of a new device presupposes the existence of a User in Keycloack and consequently also in the e-VITA platform, as the newly created device will be associated with the logged user who registered it.<br><br>In the case of this specific type of Device, which is a robot, the test verifies the correct registration of the device within the e-VITA Manager, as it is not also registered in the Device Manager tool.<br><br>The creation of the device takes as input the type (NAO_ROBOT), a source Id and a Name. The *frequency* parameter is taken into consideration only for devices connected to a Cloud Service, as it represents the frequency with which the measurements are read by the specific Cloud Service. |
| Tested Interfaces | Keycloak Identity Manager – *validateToken*<br><br>e-VITA Manager – *createDevice* |
| Input Parameters | ○ Type<br>○ Source Device ID<br>○ Device Name<br>○ Frequency |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform. |
| Expected Output | **200** Status Code |
| Test Execution Report | `- STATUS CODE: 200`<br><br>`- TEST EXECUTION TIME: 20/7/2023, 17:19:03`<br><br>`- NAO_ROBOT device correctly registered`<br><br>`√ 9) DEVICE creation - NAO_ROBOT TYPE (217ms)` |
| Test Result | Passed |



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The project has received funding from the European Union H2020 Programme under grant agreement n° 101016453. The Japanese consortium received funding by the Japanese Ministry of Internal Affairs and Communication (MIC).

| Device Management Test | |
|---|---|
| ID | 10 |
| Title | DELTADORE_MOTION_SENSOR Type Device creation |
| Description | The test checks that the registration of a new Device in the e-VITA platform, is successful. In particular, the test concerns the DELTADORE_MOTION_SENSOR device type. The creation of a new device presupposes the existence of a User in Keycloack and consequently also in the e-VITA platform, as the newly created device will be associated with the logged user who registered it.<br><br>The test verifies the integration of different components: the device is registered both in the e-VITA platform and in the Device Manager (DeMa); it is saved also in the IoT Agent JSON to then subsequently allowing the saving of its last measurement in the Context Broker. The creation of the device takes as input in addition to the type (DELTADORE_MOTION_SENSOR), a source Id and a Name. The *frequency* parameter is taken into consideration only for devices connected to a Cloud Service, as it represents the frequency with which the measurements are read by the specific Cloud Service. |
| Tested Interfaces | Keycloak Identity Manager – v*alidateToken*<br><br>e-VITA Manager – *createDevice*<br><br>IoT Agent JSON – *createDevice*<br><br>Device Manager (DEMA) - *createDevice* |
| Input Parameters | ○ Type<br>○ Source Device ID<br>○ Device Name<br>○ Frequency |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- DELTADORE_MOTION_SENSOR device correctly registered<br><br>√ 10) DEVICE creation - DELTADORE_MOTION_SENSOR TYPE (777ms) |
| Test Result | Passed |



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The project has received funding from the European Union H2020 Programme under grant agreement n° 101016453. The Japanese consortium received funding by the Japanese Ministry of Internal Affairs and Communication (MIC).

| Device Management Test | |
|---|---|
| ID | 11 |
| Title | DELTADORE_INTRUSION_SENSOR Type Device creation |
| Description | The test checks that the registration of a new Device in the e-VITA platform, is successful. In particular, the test concerns the DELTADORE_INTRUSION_SENSOR device type.<br><br>The creation of a new device presupposes the existence of a User in Keycloack and consequently also in the e-VITA platform, as the newly created device will be associated with the logged user who registered it.<br><br>The test verifies the integration of different components: the device is registered both in the e-VITA platform and in the Device Manager (DeMa); it is saved also in the IoT Agent JSON to then subsequently allowing the saving of its last measurement in the Context Broker. The creation of the device takes as input in addition to the type (DELTADORE_ INTRUSION _SENSOR), a source Id and a Name. The *frequency* parameter is taken into consideration only for devices connected to a Cloud Service, as it represents the frequency with which the measurements are read by the specific Cloud Service. |
| Tested Interfaces | Keycloak Identity Manager – v*alidateToken*<br><br>e-VITA Manager – *createDevice*<br><br>IoT Agent JSON – *createDevice*<br><br>Device Manager (DEMA) - *createDevice* |
| Input Parameters | ○ Type<br>○ Source Device ID<br>○ Device Name<br>○ Frequency |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- DELTADORE_INTRUSION_SENSOR device correctly registered<br><br>√ 11) DEVICE creation - DELTADORE_INTRUSION_SENSOR TYPE (217ms) |
| Test Result | Passed |



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| Device Management Test | |
|---|---|
| ID | 12 |
| Title | ENOCEAN_TEMPERATURE_SENSOR Type Device creation |
| Description | The test checks that the registration of a new Device in the e-VITA platform, is successful. In particular, the test concerns the ENOCEAN_TEMPERATURE_SENSOR device type.<br><br>The creation of a new device presupposes the existence of a User in Keycloack and consequently also in the e-VITA platform, as the newly created device will be associated with the logged user who registered it.<br><br>The test verifies the integration of different components: the device is registered both in the e-VITA platform and in the Device Manager (DeMa); it is saved also in the IoT Agent JSON to then subsequently allowing the saving of its last measurement in the Context Broker. The creation of the device takes as input in addition to the type (ENOCEAN_TEMPERATURE_SENSOR), a source Id and a Name. The *frequency* parameter is taken into consideration only for devices connected to a Cloud Service, as it represents the frequency with which the measurements are read by the specific Cloud Service. |
| Tested Interfaces | Keycloak Identity Manager – v*alidateToken*<br><br>e-VITA Manager – *createDevice*<br><br>IoT Agent JSON – *createDevice*<br><br>Device Manager (DEMA) - *createDevice* |
| Input Parameters | ○ Type<br>○ Source Device ID<br>○ Device Name<br>○ Frequency |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- ENOCEAN_TEMPERATURE_SENSOR device correctly registered<br><br>√ 12) DEVICE creation - ENOCEAN_TEMPERATURE_SENSOR TYPE (217ms) |
| Test Result | Passed |



Ministry of Internal Affairs and Communications, JAPAN

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| Device Management Test | |
|---|---|
| ID | 13 |
| Title | ENOCEAN_DOOR_SENSOR Type Device creation |
| Description | The test checks that the registration of a new Device in the e-VITA platform, is successful. In particular, the test concerns the ENOCEAN_DOOR_SENSOR device type.<br><br>The creation of a new device presupposes the existence of a User in Keycloack and consequently also in the e-VITA platform, as the newly created device will be associated with the logged user who registered it.<br><br>The test verifies the integration of different components: the device is registered both in the e-VITA platform and in the Device Manager (DeMa); it is saved also in the IoT Agent JSON to then subsequently allowing the saving of its last measurement in the Context Broker. The creation of the device takes as input in addition to the type (ENOCEAN_DOOR_SENSOR), a source Id and a Name. The *frequency* parameter is taken into consideration only for devices connected to a Cloud Service, as it represents the frequency with which the measurements are read by the specific Cloud Service. |
| Tested Interfaces | Keycloak Identity Manager – v*alidateToken*<br><br>e-VITA Manager – *createDevice*<br><br>IoT Agent JSON – *createDevice*<br><br>Device Manager (DEMA) - *createDevice* |
| Input Parameters | ○ Type<br>○ Source Device ID<br>○ Device Name<br>○ Frequency |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- ENOCEAN_DOOR_SENSOR device correctly registered<br><br>√ 13) DEVICE creation - ENOCEAN_DOOR_SENSOR TYPE (217ms) |
| Test Result | Passed |



Ministry of Internal Affairs and Communications, JAPAN

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| Device Management Test | |
|---|---|
| ID | 14 |
| Title | ENOCEAN_MOTION_SENSOR Type Device creation |
| Description | The test checks that the registration of a new Device in the e-VITA platform, is successful. In particular, the test concerns the ENOCEAN_MOTION_SENSOR device type.<br><br>The creation of a new device presupposes the existence of a User in Keycloack and consequently also in the e-VITA platform, as the newly created device will be associated with the logged user who registered it.<br><br>The test verifies the integration of different components: the device is registered both in the e-VITA platform and in the Device Manager (DeMa); it is saved also in the IoT Agent JSON to then subsequently allowing the saving of its last measurement in the Context Broker. The creation of the device takes as input in addition to the type (ENOCEAN_MOTION_SENSOR), a source Id and a Name. The *frequency* parameter is taken into consideration only for devices connected to a Cloud Service, as it represents the frequency with which the measurements are read by the specific Cloud Service. |
| Tested Interfaces | Keycloak Identity Manager – v*alidateToken*<br><br>e-VITA Manager – *createDevice*<br><br>IoT Agent JSON – *createDevice*<br><br>Device Manager (DEMA) - *createDevice* |
| Input Parameters | ○ Type<br>○ Source Device ID<br>○ Device Name<br>○ Frequency |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- ENOCEAN_MOTION_SENSOR device correctly registered<br><br>√ 14) DEVICE creation - ENOCEAN_MOTION_SENSOR TYPE (217ms) |
| Test Result | Passed |



The project has received funding from the European Union H2020 Programme under grant agreement n° 101016453. The Japanese consortium received funding by the Japanese Ministry of Internal Affairs and Communication (MIC).

| Device Management Test | |
|---|---|
| ID | 15 |
| Title | Device creation - Attributes Validation (wrong Device TYPE) |
| Description | The test checks that the registration of a new Device in the e-VITA platform, fails in case of incorrect Device type.<br>The creation of a new device presupposes the existence of a User in Keycloack and consequently also in the e-VITA platform, as the newly created device will be associated with the logged user who registered it.<br>The test verifies the integration of different components: the device is registered both in the e-VITA platform and in the Device Manager (DeMa); it is saved also in the IoT Agent JSON to then subsequently allowing to save its last measurement in the Context Broker. The creation of the device takes as input in addition to the type (intentionally incorrect for test purposes), a source Id and a Name. The frequency parameter is taken into consideration only for devices connected to a Cloud Service, as it represents the frequency with which the measurements are read by the specific Cloud Service.<br>It is used a wrong input (the device TYPE in this case) and the device is not registered in any component involved. |
| Tested Interfaces | Keycloak Identity Manager – *validateToken*<br>e-VITA Manager – *createDevice*<br>IoT Agent JSON – *createDevice*<br>Device Manager (DEMA) - *createDevice* |
| Input Parameters | ○ Type<br>○ Source Device ID<br>○ Device Name<br>○ Frequency |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br>Existence of the specific User in the e-VITA Manager Platform. |
| Expected Output | 400 Status Code |
| Test Execution Report | - STATUS CODE: 400<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- ATTRIBUTES VALIDATION (TYPE) correctly performed<br>- Device with wrong TYPE attribute NOT registered<br>√ 15) DEVICE creation - ATTRIBUTES VALIDATION (TYPE) (50ms) |
| Test Result | Passed |



Ministry of Internal Affairs and Communications, JAPAN

The project has received funding from the European Union H2020 Programme under grant agreement n° 101016453. The Japanese consortium received funding by the Japanese Ministry of Internal Affairs and Communication (MIC).

| Device Management Test | |
|---|---|
| ID | 16 |
| Title | Device retrieving |
| Description | The test checks that the obtaining of all devices registered in the e-VITA platform, is successful. Obtaining all devices presupposes the existence of a User in Keycloack and consequently also in the e-VITA platform, to which these devices belong. The test verifies that the number of devices returned is equal to the number of devices registered on the e-VITA platform. |
| Tested Interfaces | Keycloak Identity Manager – v*alidateToken*<br>e-VITA Manager - *getDevices* |
| Input Parameters | None |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br>Existence of the specific User in the e-VITA Manager Platform. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- Number of Devices retrieved (registered until now): 8<br>√ 16) DEVICE retrieving (98ms) |
| Test Result | Passed |



Ministry of Internal Affairs and Communications, JAPAN

The project has received funding from the European Union H2020 Programme under grant agreement n° 101016453. The Japanese consortium received funding by the Japanese Ministry of Internal Affairs and Communication (MIC).

| Device Management Test | |
|---|---|
| ID | 17 |
| Title | Device deletion |
| Description | The test checks that the deletion of a device registered in the e-VITA platform, is successful. Deleting a device presupposes the existence of a User in Keycloack and consequently also in the e-VITA platform, to the specific device belong.<br><br>The device to be deleted must be identified using its e-VITA device Id.<br><br>The test verifies the integration of different components: if the test is successful, the device is deleted both from the e-VITA platform in correspondence with the user to which it belongs and also from the Device Manager (DeMa), consequently from the IoT Agent JSON and the Context Broker, along with his information about the last measurement.<br><br>Lastly, in the case of deleting a Device associated with a Cloud Service, the process that allowed to obtain the last measurement of it, based on the *frequency* parameter set by the user during the device registration phase, is deactivated. |
| Tested Interfaces | Keycloak Identity Manager – v*alidateToken*<br><br>e-VITA Manager – *deleteDevice*<br><br>IoT Agent JSON – *deleteDevice*<br><br>ORION Context Broker - *deleteDevice*<br><br>Device Manager (DEMA) - *deleteDevice* |
| Input Parameters | Evita Device ID |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- Device successfully deleted<br><br>√ 17) DEVICE deletion - ENOCEAN_MOTION_SENSOR TYPE (155ms) |
| Test Result | Passed |



Ministry of Internal Affairs and Communications, JAPAN

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### 2.3.1 Interaction with Device Manager (DEMA)

This section of the document contains the integration tests which verify that the communication between the e-VITA platform and the Device Manager (DEMA) component is successful. The tests therefore verify the correct cooperation between the different software components involved in this phase.

| **Device Manager Test** | |
|---|---|
| ID | 18 |
| Title | Getting all Registered Devices from the Device Manager (DEMA) |
| Description | The test checks the presence of all devices registered in the e-VITA platform, within the DEMA tool, with the exception of coaching devices; the latter are not added within the DEMA as they send messages and not measurements, so they are not registered as it is expected that they do not send measurements to the Context Broker.<br><br>The User making the request must be aware of two parameters: the Fiware Service and the Fiware Service Path, as they must be sent together with the request for receiving all the registered devices, otherwise it will not be possible to obtain them. |
| Tested Interfaces | Device Manager (DEMA) - *getDevices* |
| Input Parameters | ○ Fiware Service<br>○ Fiware Service Path |
| Preconditions | One or more devices must have previously been registered on the e-VITA platform. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- Devices present in the DEMA component, number of devices (which are NOT GATEBOX, NAO_ROBOT or ANDROID_ROBOT): 4<br><br>√ 18) GETTING DEVICES from Device Manager (DEMA) (199ms) |
| Test Result | Passed |



Ministry of Internal Affairs and Communications, JAPAN

The project has received funding from the European Union H2020 Programme under grant agreement n° 101016453. The Japanese consortium received funding by the Japanese Ministry of Internal Affairs and Communication (MIC).

| Send Device Data Test | |
|---|---|
| ID | 19 |
| Title | Sending Measurement from a Device (ENOCEAN_DOOR_SENSOR type) |
| Description | The test checks that the measurement related to a device, are successfully sent. The test verifies the integration of different components: the specific device must have been previously registered on the platform, as it is necessary to know the Id and the Token of the device in order to send the measurement. In addition to this two information, the Payload containing the actual measurement must be sent, accordingly to the type of device considered.<br><br>Lastly, the measurement is also sent to the IoT Agent JSON to allow its publication on the Context Broker. |
| Tested Interfaces | Keycloak Identity Manager – v*alidateToken*<br><br>e-VITA Manager – *sendData*<br><br>IoT Agent JSON – *sendMeasure*<br><br>ORION Context Broker - *uploadDeviceLastMeasure* |
| Input Parameters | ○ Evita Device ID<br>○ Evita Device Token<br>○ Payload of the specific Device Type (Status and Timestamp) |
| Preconditions | The Device considered for sending the measurement must have been previously registered. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- Measurement SENT successfully<br><br>√ 19) SENDING MEASUREMENT from ENOCEAN_DOOR_SENSOR device TYPE (115ms) |
| Test Result | Passed |



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The project has received funding from the European Union H2020 Programme under grant agreement n° 101016453. The Japanese consortium received funding by the Japanese Ministry of Internal Affairs and Communication (MIC).

| Send Device Data Test | |
|---|---|
| ID | 20 |
| Title | Sending Measurement from a Device (ENOCEAN_TEMPERATURE_SENSOR type) |
| Description | The test checks that the measurements related to a device, are successfully sent. The test verifies the integration of different components: the specific device must have been previously registered on the platform, as it is necessary to know the Id and the Token of the device in order to send the measurement. In addition to this two information, the Payload containing the actual measurement must be sent, accordingly to the type of device considered.<br><br>Lastly, the measurement is also sent to the IoT Agent JSON to allow its publication on the Context Broker. |
| Tested Interfaces | Keycloak Identity Manager – v*alidateToken*<br><br>e-VITA Manager – *sendData*<br><br>IoT Agent JSON – *sendMeasure*<br><br>ORION Context Broker - *uploadDeviceLastMeasure* |
| Input Parameters | ○ Evita Device ID<br>○ Evita Device Token<br>○ Payload of the specific Device Type (Temperature, Humidity and Timestamp) |
| Preconditions | The Device considered for sending the measurement must have been previously registered. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- Measurement SENT successfully<br><br>√ 20) SENDING MEASUREMENT from ENOCEAN_TEMPERATURE_SENSOR device TYPE (115ms) |
| Test Result | Passed |



The project has received funding from the European Union H2020 Programme under grant agreement n° 101016453. The Japanese consortium received funding by the Japanese Ministry of Internal Affairs and Communication (MIC).

| Send Device Data Test | |
|---|---|
| ID | 21 |
| Title | Sending Measurement from a Device (DELTADORE_MOTION_SENSOR type) |
| Description | The test checks that the measurements related to a device, are successfully sent. The test verifies the integration of different components: the specific device must have been previously registered on the platform, as it is necessary to know the Id and the Token of the device in order to send the measurement. In addition to this two information, the Payload containing the actual measurement must be sent, accordingly to the type of device considered.<br><br>Lastly, the measurement is also sent to the IoT Agent JSON to allow its publication on the Context Broker. |
| Tested Interfaces | Keycloak Identity Manager – *validateToken*<br><br>e-VITA Manager – *sendData*<br><br>IoT Agent JSON – *sendMeasure*<br><br>ORION Context Broker - *uploadDeviceLastMeasure* |
| Input Parameters | ○ Evita Device ID<br>○ Evita Device Token<br>○ Payload of the specific Device Type (AutoProtect, BattDefect, MotionDetect and Timestamp) |
| Preconditions | The Device considered for sending the measurement must have been previously registered. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- Measurement SENT successfully<br><br>√ 21) SENDING MEASUREMENT from DELTADORE_MOTION_SENSOR device TYPE (115ms) |
| Test Result | Passed |



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| Send Device Data Test | |
|---|---|
| ID | 22 |
| Title | Sending Measurement from a Device (DELTADORE_INTRUSION_SENSOR type) |
| Description | The test checks that the measurements related to a device, are successfully sent. The test verifies the integration of different components: the specific device must have been previously registered on the platform, as it is necessary to know the Id and the Token of the device in order to send the measurement. In addition to this two information, the Payload containing the actual measurement must be sent, accordingly to the type of device considered.<br><br>Lastly, the measurement is also sent to the IoT Agent JSON to allow its publication on the Context Broker. |
| Tested Interfaces | Keycloak Identity Manager – v*alidateToken*<br><br>e-VITA Manager – *sendData*<br><br>IoT Agent JSON – *sendMeasure*<br><br>ORION Context Broker - *uploadDeviceLastMeasure* |
| Input Parameters | ○ Evita Device ID<br>○ Evita Device Token<br>○ Payload of the specific Device Type (AutoProtect, BattDefect, IntrusionDetect and Timestamp) |
| Preconditions | The Device considered for sending the measurement must have been previously registered. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- Measurement SENT successfully<br><br>√ 22) SENDING MEASUREMENT from DELTADORE_INTRUSION_SENSOR device TYPE (115ms) |
| Test Result | Passed |



Ministry of Internal Affairs and Communications, JAPAN

The project has received funding from the European Union H2020 Programme under grant agreement n° 101016453. The Japanese consortium received funding by the Japanese Ministry of Internal Affairs and Communication (MIC).

| Send Device Data Test | |
|---|---|
| ID | 23 |
| Title | Sending Measurement from a Device (tested example: ENOCEAN_DOOR_SENSOR type) - Attributes Validation (wrong Payload) |
| Description | The test checks that the measurements related to a device, are successfully sent. The test verifies the integration of different components: the specific device must have been previously registered on the platform, as it is necessary to know the Id and the Token of the device in order to send the measurement. In addition to this two information, the Payload containing the actual measurement must be sent, accordingly to the type of device considered.<br>For the purposes of this test, the format of the Payload sent with the request does not conform to the specific type of device.<br>Lastly, the measurement is also sent to the IoT Agent JSON to allow its insertion within the Context Broker.<br>An incorrect input is sent (the device Payload in this case) and the measurement is not sent in any component involved. |
| Tested Interfaces | Keycloak Identity Manager – *validateToken*<br>e-VITA Manager – *sendData*<br>IoT Agent JSON – *sendMeasure*<br>ORION Context Broker - *uploadDeviceLastMeasure* |
| Input Parameters | ○ Evita Device ID<br>○ Evita Device Token<br>○ Payload (Status and Timestamp) |
| Preconditions | Existence of the specific User in the e-VITA Manager Platform.<br>The Device considered for sending the measurement must have been previously registered. |
| Expected Output | 400 Status Code |
| Test Execution Report | - STATUS CODE: 400<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- ATTRIBUTES VALIDATION (wrong payload) correctly performed<br>√ 23) SENDING MEASUREMENT from ENOCEAN_DOOR_SENSOR TYPE device - ATTRIBUTES VALIDATION (wrong payload) |
| Test Result | Passed |



Ministry of Internal Affairs and Communications, JAPAN

The project has received funding from the European Union H2020 Programme under grant agreement n° 101016453. The Japanese consortium received funding by the Japanese Ministry of Internal Affairs and Communication (MIC).

| Send Device Data Test | |
|---|---|
| ID | 24 |
| Title | Sending Measurement from a Device (tested example: ENOCEAN_DOOR_SENSOR type) - Attributes Validation (wrong Device ID) |
| Description | The test checks that the sending of a measurement to the e-VITA platform related to a device, fails in case of incorrect Device ID.<br>The test verifies the integration of different components: the specific device must have been previously registered on the platform, as it is necessary to know the Id and the Token of the device in order to send the measurement. In addition to this two information, the Payload containing the actual measurement must be sent, whose format changes according to the type of device considered. For the purposes of this test, the Device ID sent with the request does not match any registered device.<br>Lastly, the measurement is also sent to the IoT Agent JSON to allow its insertion within the Context Broker.<br>Being an input not correct (the Device ID in this case) the measurement is not sent in any component involved. |
| Tested Interfaces | Keycloak Identity Manager – v*alidateToken*<br>e-VITA Manager – *sendData*<br>IoT Agent JSON – *sendMeasure*<br>ORION Context Broker - *uploadDeviceLastMeasure* |
| Input Parameters | ○ Evita Device ID<br>○ Evita Device Token<br>○ Payload (Status and Timestamp) |
| Preconditions | Existence of the specific User in the e-VITA Manager Platform.<br>The Device considered for sending the measurement must have been previously registered. |
| Expected Output | 400 Status Code |
| Test Execution Report | - STATUS CODE: 400<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- PARAMETERS VALIDATION (wrong DEVICE ID) correctly performed<br>√ 24) SENDING MEASUREMENT from ENOCEAN_DOOR_SENSOR TYPE device - PARAMETERS VALIDATION (wrong DEVICE ID) |
| Test Result | Passed |



Ministry of Internal Affairs and Communications, JAPAN

The project has received funding from the European Union H2020 Programme under grant agreement n° 101016453. The Japanese consortium received funding by the Japanese Ministry of Internal Affairs and Communication (MIC).

| Send Device Data Test | |
|---|---|
| ID | 25 |
| Title | Sending Measurement from a Device (tested example: ENOCEAN_DOOR_SENSOR type) - Attributes Validation (wrong Device Token) |
| Description | The test checks that the sending of a measurement to the e-VITA platform related to a device, fails in case of incorrect Device Token.<br>The test verifies the integration of different components: the specific device must have been previously registered on the platform, as it is necessary to know the Id and the Token of the device in order to send the measurement. In addition to this two information, the Payload containing the actual measurement must be sent, whose format changes according to the type of device considered. For the purposes of this test, the Device Token sent with the request does not match any registered device.<br>Lastly, the measurement is also sent to the IoT Agent JSON to allow its insertion within the Context Broker.<br>Being an input not correct (the Device Token in this case) the measurement is not sent in any component involved. |
| Tested Interfaces | Keycloak Identity Manager – *validateToken*<br>e-VITA Manager – *sendData*<br>IoT Agent JSON – *sendMeasure*<br>ORION Context Broker - *uploadDeviceLastMeasure* |
| Input Parameters | ○ Evita Device ID<br>○ Evita Device Token<br>○ Payload (Status and Timestamp) |
| Preconditions | Existence of the specific User in the e-VITA Manager Platform.<br>The Device considered for sending the measurement must have been previously registered. |
| Expected Output | 404 Status Code |
| Test Execution Report | - STATUS CODE: 404<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- PARAMETERS VALIDATION (wrong DEVICE TOKEN) correctly performed<br>√ 25) SENDING MEASUREMENT from ENOCEAN_DOOR_SENSOR TYPE device - PARAMETERS VALIDATION (wrong DEVICE TOKEN) (39ms) |
| Test Result | Passed |



Ministry of Internal Affairs and Communications, JAPAN

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## 2.4 Connection with device cloud services

This section of the document contains the integration tests that verify the correct creation and management of a new Cloud Service in e-VITA platform, considering all the types of Services supported by the platform, and the creation of the Devices associated with the specific Service. The tests therefore verify the correct cooperation between the different software components involved in this phase.

| **Service Management Test** | |
|---|---|
| ID | 26 |
| Title | Login into the Netatmo Cloud Service |
| Description | The test verifies that a Netatmo cloud service access token is successfully obtained. This presupposes the existence of a registered User on the Netatmo platform whose credentials are known. Moreover, this user must have registered an application in his user area in Netatmo, necessary to read the data from his Netatmo device. |
| Tested Interfaces | Netatmo Cloud Service - *createToken* |
| Input Parameters | ○ Client ID<br>○ Client Secret<br>○ Username<br>○ Password<br>○ Grant Type<br>○ Scope |
| Preconditions | Existence of a User and its application (connected to a Netatmo Device) in the Netatmo Cloud Service. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- NETATMO TOKEN correctly retrieved<br>√ 26) LOGIN into NETATMO CLOUD SERVICE (2297ms) |
| Test Result | Passed |



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| Service Management Test | |
|---|---|
| ID | 27 |
| Title | Device related to a Service creation - NETATMO_AIR_QUALITY type - Attributes Validation (Device creation before registering the Service) |
| Description | The test checks that the registration of a new Device in the e-VITA platform, in particular the NETATMO_AIR_QUALITY device type, fails in case of non-existence of the respective Service in the platform (in this specific case, the NETATMO Service).<br><br>It is not possible to register a Device type that is connected to a Cloud platform, before registering this Cloud Service in the e-VITA Tool. The error code indicates the prior non-registration of the Service, and that the server cannot process this request, which is considered to be incorrect.<br><br>For this type of Device, which is connected to a Cloud Service, at the time of the Device creation, the e-VITA platform takes its measurement from the specific Cloud periodically based on the value of the *frequency* parameter.<br><br>Since the Service is not registered, the device is not registered in any component involved. |
| Tested Interfaces | Keycloak Identity Manager – *validateToken*<br><br>e-VITA Manager – *createDevice*<br><br>IoT Agent JSON – *createDevice*<br><br>Device Manager (DEMA) - *createDevice*<br><br>Netatmo Cloud Service – *getHomecoachsData* |
| Input Parameters | ○ Type<br>○ Source Device ID<br>○ Device Name<br>○ Frequency |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform.<br><br>Existence of a Token obtained by logging into the Netatmo Cloud Service.<br><br>Non-Existence in the e-VITA Manager platform of the Netatmo type Service. |
| Expected Output | **400** Status Code |



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| | |
|---|---|
| Test Execution Report | - STATUS CODE: 400<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- ATTRIBUTES VALIDATION correctly performed<br>- Unable to create a DEVICE related to a SERVICE before registering the SERVICE<br>√ 27) DEVICE related to a SERVICE creation - NETATMO_AIR_QUALITY TYPE - ATTRIBUTES VALIDATION (DEVICE creation before registering the SERVICE) (701ms) |
| Test Result | Passed |

| **Service Management Test** | |
|---|---|
| ID | 28 |
| Title | Service creation – NETATMO type |
| Description | The test checks that the creation of a Service in the e-VITA platform, is successful. In particular, the test concerns the NETATMO service type.<br>This creation presupposes the existence of a User in Keycloack and consequently also in the e-VITA platform and the existence of an access token of the Netatmo cloud platform (obtained through access to the specific cloud platform). |
| Tested Interfaces | e-VITA Manager - *createService* |
| Input Parameters | ○ Type<br>○ Token |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br>Existence of the specific User in the e-VITA Manager Platform.<br>Existence of a Token obtained by logging into the Netatmo Cloud Service. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- NETATMO SERVICE correctly registered<br>√ 28) SERVICE creation - NETATMO TYPE (129ms) |
| Test Result | Passed |



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| Service Management Test | |
|---|---|
| ID | 29 |
| Title | Device related to a Service creation - NETATMO_AIR_QUALITY type |
| Description | The test checks that the registration of a new Device in the e-VITA platform, is successful. In particular, the test concerns the NETATMO_AIR_QUALITY device type.<br><br>The creation of a new device presupposes the existence of a User in Keycloack and consequently also in the e-VITA platform, as the newly created device will be associated with the logged user who registered it. Moreover, the creation of this specific type of device presupposes that the user has previously logged into the Netatmo cloud service.<br><br>The test verifies the integration of different components: the device is registered both in the e-VITA platform and in the Device Manager (DeMa); it is saved also in the IoT Agent JSON to then subsequently allowing the saving of its last measurement in the Context Broker. The creation of the device takes as input in addition to the type (NETATMO_AIR_QUALITY), a source Id and a Name, a value that represents the *frequency* with which the last measurement will be read from the Netatmo Cloud Service.<br><br>For this type of Device, which is connected to a Cloud Service, at the time of the Device creation, the e-VITA platform takes its measurement from the specific Cloud and does so periodically based on the value of the *frequency* parameter. |
| Tested Interfaces | Keycloak Identity Manager – *validateToken*<br><br>e-VITA Manager – *createDevice*<br><br>IoT Agent JSON – *createDevice*<br><br>Device Manager (DEMA) - *createDevice*<br><br>Netatmo Cloud Service – *getHomecoachsData* |
| Input Parameters | ○ Type<br>○ Source Device ID<br>○ Device Name<br>○ Frequency |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform.<br><br>Existence of a Token obtained by logging into the Netatmo Cloud Service.<br><br>Existence in the e-VITA Manager platform of the Netatmo type Service. |
| Expected Output | **200** Status Code |



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| | |
|---|---|
| Test Execution Report | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- NETATMO_AIR_QUALITY device correctly registered<br>√ 29) DEVICE related to a SERVICE creation - NETATMO_AIR_QUALITY TYPE (701ms) |
| Test Result | Passed |

| **Service Management Test** | |
|---|---|
| ID | 30 |
| Title | Login into the Neu/Strapi Cloud Service |
| Description | The test verifies that a Neu/Strapi cloud service access token is successfully obtained. This presupposes the existence of a registered User on the Neu/Strapi platform whose credentials are known. |
| Tested Interfaces | Strapi Cloud Service - *createToken* |
| Input Parameters | ○ Username<br>○ Password |
| Preconditions | Existence of a User in the Strapi Cloud Service. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- STRAPI TOKEN correctly retrieved<br>√ 30) LOGIN into NEU/STRAPI CLOUD SERVICE (2297ms) |
| Test Result | Passed |



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| Service Management Test | |
|---|---|
| ID | 31 |
| Title | Service creation – NEU/STRAPI type |
| Description | The test checks that the creation of a Service in the e-VITA platform, is successful. In particular, the test concerns the NEU/STRAPI service type.<br>This creation presupposes the existence of a User in Keycloack and consequently also in the e-VITA platform and the existence of an access token of the Strapi cloud platform (obtained through access to the specific cloud platform). |
| Tested Interfaces | Keycloak Identity Manager – *validateToken*<br>e-VITA Manager - *createService* |
| Input Parameters | ○ Type<br>○ Token |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br>Existence of the specific User in the e-VITA Manager Platform.<br>Existence of a Token obtained by logging into the Strapi Cloud Service. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- NEU SERVICE correctly registered<br>√ 31) SERVICE creation - NEU/STRAPI TYPE (1090ms) |
| Test Result | Passed |



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| Service Management Test | |
|---|---|
| ID | 32 |
| Title | Device related to a Service creation - NEU_TRAINING type |
| Description | The test checks that the registration of a new Device in the e-VITA platform, is successful. In particular, the test concerns the NEU_TRAINING device type.<br><br>The creation of a new device presupposes the existence of a User in Keycloack and consequently also in the e-VITA platform, as the newly created device will be associated with the logged user who registered it. Moreover, the creation of this specific type of device presupposes that the user has previously logged into the Strapi cloud service.<br><br>The test verifies the integration of different components: the device is registered both in the e-VITA platform and in the Device Manager (DeMa); it is saved also in the IoT Agent JSON to then subsequently allowing the saving of its last measurement in the Context Broker. The creation of the device takes as input in addition to the type (NEU_TRAINING), a source Id and a Name, a value that represents the *frequency* with which the last measurement will be read from the Neu/Strapi Cloud Service.<br><br>For this type of Device, which is connected to a Cloud Service, at the time of the Device creation, the e-VITA platform takes its measurement from the specific Cloud periodically based on the value of the *frequency* parameter. |
| Tested Interfaces | Keycloak Identity Manager – *validateToken*<br><br>e-VITA Manager – *createDevice*<br><br>IoT Agent JSON – *createDevice*<br><br>Device Manager (DEMA) - *createDevice*<br><br>Strapi Cloud Service - *getTrainingData* |
| Input Parameters | ○ Type<br>○ Source Device ID<br>○ Device Name<br>○ Frequency |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform.<br><br>Existence of a Token obtained by logging into the Strapi Cloud Service.<br><br>Existence in the e-VITA Manager platform of the Strapi type Service. |
| Expected Output | 200 Status Code |



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| | |
|---|---|
| Test Execution Report | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- NEU_TRAINING device correctly registered<br>√ 32) DEVICE related to a SERVICE creation - NEU_TRAINING TYPE (294ms) |
| Test Result | Passed |

| **Service Management Test** | |
|---|---|
| ID | 33 |
| Title | Device related to a Service creation - NEU_BRAIN type |
| Description | The test checks that the registration of a new Device in the e-VITA platform, is successful. In particular, the test concerns the NEU_BRAIN device type.<br>The creation of a new device presupposes the existence of a User in Keycloack and consequently also in the e-VITA platform, as the newly created device will be associated with the logged user who registered it. Moreover, the creation of this specific type of device presupposes that the user has previously logged into the Strapi cloud service.<br>The test verifies the integration of different components: the device is registered both in the e-VITA platform and in the Device Manager (DeMa); it is saved also in the IoT Agent JSON to then subsequently allowing the saving of its last measurement in the Context Broker. The creation of the device takes as input in addition to the type (NEU_BRAIN), a source Id and a Name, a value that represents the *frequency* with which the last measurement will be read from the Neu/Strapi Cloud Service.<br>For this type of Device, which is connected to a Cloud Service, at the time of the Device creation, the e-VITA platform takes its measurement from the specific Cloud and does so periodically based on the value of the *frequency* parameter. |
| Tested Interfaces | Keycloak Identity Manager – v*alidateToken*<br>e-VITA Manager – *createDevice*<br>IoT Agent JSON – *createDevice*<br>Device Manager (DEMA) - *createDevice*<br>Strapi Cloud Service - *getBrainData* |



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| | |
|---|---|
| **Input Parameters** | ○ Type<br>○ Source Device ID<br>○ Device Name<br>○ Frequency |
| **Preconditions** | Existence of an Access Token specific for the User in Keycloak.<br>Existence of the specific User in the e-VITA Manager Platform.<br>Existence of a Token obtained by logging into the Strapi Cloud Service.<br>Existence in the e-VITA Manager platform of the Strapi type Service. |
| **Expected Output** | **200** Status Code |
| **Test Execution Report** | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- NEU_BRAIN device correctly registered<br>√ 33) DEVICE related to a SERVICE creation - NEU_BRAIN TYPE (239ms) |
| **Test Result** | Passed |



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## 2.5 Reminders management

This section of the document contains the integration tests that verify the correct creation and management of a new User Reminder in the e-VITA platform. Reminders are chosen and created by users so that they receive alerts reminding them of events. The tests therefore verify the correct cooperation between the different software components involved in this phase. Indeed, the creation of a Reminder involves the creation of an Entity that represents it within the Orion Context Broker and the creation of a Rule within the Perseo component to allow the receipt of the notice.

A Reminder is directly connected to a coaching device (robot) of the user. In the Reminder creation phase, the user is required to choose one of his robots who will be the one in charge of communicating the notice.

| **User Reminders Tests** | |
|---|---|
| **ID** | **34** |
| **Title** | User Reminder Creation |
| **Description** | The test checks that the list of users associated with the e-VITA logged user is correctly created. It is not returned in case of wrong (or not present) Keycloack access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| **Tested Interfaces** | Keycloak Identity Manager - v*alidateToken*<br><br>e-VITA Manager - create*UserReminder* |
| **Input Parameters** | None |
| **Preconditions** | Non-existence of an Access Token specific for the User in Keycloak (or wrong Token);<br><br>Existence of the specific User in the e-VITA Manager Platform. |
| **Expected Output** | **200** Status Code |
| **Test Execution Report** | `- STATUS CODE: 200`<br><br>`- TEST EXECUTION TIME: 20/7/2023, 17:19:03`<br><br>`- REMINDER ID of the created RULE: 64b95e7c38824c384cf8e3af`<br><br>`√ 34) USER - REMINDER creation (138ms)` |
| **Test Result** | Passed |



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| User Reminders Tests | |
|---|---|
| ID | 35 |
| Title | User Reminder retrieving |
| Description | The test checks that the list of Reminders related to the e-VITA logged user is correctly retrieved. It is not returned in case of wrong (or not present) Keycloack access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - *validateToken*<br><br>e-VITA Manager - get*UserReminders* |
| Input Parameters | None |
| Preconditions | Non-existence of an Access Token specific for the User in Keycloak (or wrong Token);<br><br>Existence of the specific User in the e-VITA Manager Platform.<br><br>Existence of the specific Reminder in the e-VITA Manager Platform. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- USER REMINDER correctly retrieved<br>[{"objectId":{"timestamp":1689940891,<br>"date":1689940891000},"id":"64ba739bbaf1e60f5d42eb90","evitaUserId":"b554033b-1f4a-465c-b1f6-4b80ff7ebb52","type":<br>"Reminder","notificationType":"","message":<br>"External_assistance_with_indoor_safety", "eventSchedule":<br>"2023-07-12T23:00:00.000Z","repetitionPeriod":"1<br>Day","numberRepetitions":1,"notifyInAdvance":"1 days<br>","reminderString": "R1/2023-07-12T01:00:00+02:00/P0Y0M1DT0H0M",<br>"deviceId":"64ba7395baf1e60f5d42eb7e", "deviceToken"<br>:"37577669-f9cb-4616-a956-66ae7fe3dd08",<br>"reminderTitle":null}]<br><br>√ 35) USER - REMINDER retrieving (135ms) |
| Test Result | Passed |



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### 2.5.1 Interaction with Perseo

This section of the document contains the integration tests which verify that the communication between the e-VITA platform and Perseo component is successful. The creation of a Reminder by a user involves the automatic creation of a Rule in Perseo component, necessary for the correct management of events and receipt of the notice by the user. The tests therefore verify the correct cooperation between the different software components involved in this phase.

| **Perseo Tests** | |
|---|---|
| ID | 36 |
| Title | Perseo Rule retrieving |
| Description | The test checks that that the Rule in Perseo has been correctly created automatically following the creation into the e-VITA platform of the Reminder by the user. |
| Tested Interfaces | Perseo - *getRule* |
| Input Parameters | o Rule ID<br>o User *fiware-service* (in the headers)<br>o User *fiware-servicepath* (in the headers) |
| Preconditions | Existence of the specific User related to the specific *fiware-service* in the e-VITA Manager Platform.<br>Existence of the Reminder created by the user. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- PERSEO RULE correctly retrieved<br>- RULE retrieved:<br>{"_id":"64ba7cdca611a9c2a1aebead", "name":"64ba7cdbbaf1e60f5d42eda2","text":"select\"64ba7cdbbaf1e60f5d42eda2@b554033b_1f4a_465c_b1f6_4b80ff7ebb52/b554033b_1f4a_465c_b1f6_4b80ff7ebb52 |



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| | |
|---|---|
| | \" as ruleName, * from pattern[every timer:schedule(iso: 'R1/2023-07-20T00 :30:00+02:00/P0Y0M0DT12H0M')]", "action":{"type":"post","parameters" :{"url":"https://manager.evita.digital-enabler.eng.it/api/clients/users/ send_notification?deviceId=64ba7c29baf1e60f5d42ed71&deviceToken=62b76e86- d679-438a-8503-16a5066e5b58&type=INTENT&reminderId= 64ba7cdbbaf1e60f5d42eda2","method":"post","headers":{"Content- type":"application/json","accept":"*/*"},"json":{"message":"External_assist ance_with_indoor_safety","id":"64ba7cdbbaf1e60f5d42eda2"}}},"subservice":"/ b554033b_1f4a_465c_b1f6_4b80ff7ebb52","service":"b554033b_1f4a_465c_b1f6_4b 80ff7ebb52"}<br><br>√ 36) PERSEO RULE retrieving (118ms) |
| **Test Result** | Passed |

| **User Reminders Tests** | |
|---|---|
| **ID** | **37** |
| **Title** | User Reminder deletion |
| **Description** | The test checks that the specific passed Reminder associated with the e-VITA logged user is correctly deleted. It is not returned in case of wrong (or not present) Keycloack access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information.<br><br>The deletion of a Reminder also entails the deletion of the related Rule in Perseo (whose test is shown in the next table). |
| **Tested Interfaces** | Keycloak Identity Manager - v*alidateToken*<br><br>e-VITA Manager - delete*UserReminder* |
| **Input Parameters** | o Reminder ID |
| **Preconditions** | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform.<br><br>Existence of the specific Reminder in the e-VITA Manager Platform. |
| **Expected Output** | **200** Status Code |



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| | |
|---|---|
| Test Execution Report | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- REMINDER successfully deleted<br>√ 37) USER - REMINDER deletion (658ms) |
| Test Result | Passed |

| **Perseo Tests** | |
|---|---|
| ID | **38** |
| Title | Perseo Rule deleting |
| Description | The test checks that the specified Rule is correctly deleted by Perseo. This is not done in case of an incorrect value of the *fiware-service* and *fiware-servicepath* headers. |
| Tested Interfaces | Perseo - *deleteRule* |
| Input Parameters | o Rule ID<br>o User *fiware-service* (in the headers)<br>o User *fiware-servicepath* (in the headers) |
| Preconditions | Existence of the specific User related to the specific *fiware-service* in the e-VITA Manager Platform.<br>Existence of the specific Perseo Rule related to Rule ID in Perseo. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- PERSEO RULE successfully deleted<br>√ 38) PERSEO integration - RULE deletion (181ms) |
| Test Result | Passed |



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## 2.6 Data provisioning and storage

This section of the document contains the integration tests that verify the presence, in the Context Broker, of the last measurement associated to a Device, which has been correctly sent previously; also the tests verify that the integration and communication between the e-VITA platform and the Object Storage (MinIO) has occurred correctly, by checking that the Bucket associated with the User currently logged into the platform is actually present in the MinIO component.

### 2.6.1 Interaction with Orion Context Broker

This section of the document contains the integration tests which verify that the communication between the e-VITA platform and the Orion Context broker component is successful. The tests therefore verify the correct cooperation between the different software components involved in this phase.

| **Orion Context Broker Test** | |
|---|---|
| ID | 39 |
| Title | Getting the Last Measurement of a specific Device from ORION Context Broker (ENOCEAN_DOOR_SENSOR TYPE) |
| Description | The test checks that the last measurement sent by a specific device is present in the Context Broker. The device must have been previously registered on the platform otherwise if it doesn't, it would not be present within the Context Broker; the measurement must also have been previously sent. Moreover, the User that makes the request must be aware of two parameters: the Fiware Service and the Fiware Service Path, as they must be sent together with the request for receiving the measurement, otherwise it will not be possible to obtain it. |
| Tested Interfaces | ORION Context Broker - *getDeviceLastMeasure* |
| Input Parameters | ○ Evita Device ID<br>○ Fiware Service<br>○ Fiware Service Path |
| Preconditions | The Device considered must have already sent a measurement. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- Device present in ORION and last measurement correctly retrieved<br>√ 39) GETTING LAST MEASUREMENT from ENOCEAN_DOOR_SENSOR TYPE device in ORION (52ms) |
| Test Result | Passed |



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| Orion Context Broker Test | |
|---|---|
| ID | 40 |
| Title | Getting the Last Measurement of a specific Device from ORION Context Broker (ENOCEAN_TEMPERATURE_SENSOR TYPE) |
| Description | The test checks that the last measurement sent by a specific device is present in the Context Broker. The device must have been previously registered on the platform otherwise if it doesn't, it would not be present within the Context Broker; the measurement must also have been previously sent.<br><br>Moreover, the User who makes the request must be aware of two parameters: the Fiware Service and the Fiware Service Path, as they must be sent together with the request for receiving the measurement, otherwise it will not be possible to obtain it. |
| Tested Interfaces | ORION Context Broker - *getDeviceLastMeasure* |
| Input Parameters | ○ Evita Device ID<br>○ Fiware Service<br>○ Fiware Service Path |
| Preconditions | The Device considered must have already sent a measurement. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- Device present in ORION and last measurement correctly retrieved<br><br>√ 40) GETTING LAST MEASUREMENT from ENOCEAN_TEMPERATURE_SENSOR TYPE device in ORION (52ms) |
| Test Result | Passed |



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| Orion Context Broker Test | |
|---|---|
| ID | 41 |
| Title | Getting the Last Measurement of a specific Device from ORION Context Broker (DELTADORE_MOTION_SENSOR TYPE) |
| Description | The test checks that the last measurement sent by a specific device is present in the Context Broker. The device must have been previously registered on the platform otherwise if it doesn't, it would not be present within the Context Broker; the measurement must also have been previously sent.<br><br>Moreover, the User who makes the request must be aware of two parameters: the Fiware Service and the Fiware Service Path, as they must be sent together with the request for receiving the measurement, otherwise it will not be possible to obtain it. |
| Tested Interfaces | ORION Context Broker - *getDeviceLastMeasure* |
| Input Parameters | ○ Evita Device ID<br>○ Fiware Service<br>○ Fiware Service Path |
| Preconditions | The Device considered must have already sent a measurement. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- Device present in ORION and last measurement correctly retrieved<br><br>√41) GETTING LAST MEASUREMENT from DELTADORE_MOTION_SENSOR TYPE device in ORION (52ms) |
| Test Result | Passed |



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| Orion Context Broker Test | |
|---|---|
| ID | 42 |
| Title | Getting the Last Measurement of a specific Device from ORION Context Broker (DELTADORE_INTRUSION_SENSOR TYPE) |
| Description | The test checks that the last measurement sent by a specific device is present in the Context Broker. The device must have been previously registered on the platform otherwise if it doesn't, it would not be present within the Context Broker; the measurement must also have been previously sent.<br><br>Moreover, the User who makes the request must be aware of two parameters: the Fiware Service and the Fiware Service Path, as they must be sent together with the request for receiving the measurement, otherwise it will not be possible to obtain it. |
| Tested Interfaces | ORION Context Broker - *getDeviceLastMeasure* |
| Input Parameters | ○ Evita Device ID<br>○ Fiware Service<br>○ Fiware Service Path |
| Preconditions | The Device considered must have already sent a measurement. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- Device present in ORION and last measurement correctly retrieved<br><br>√42) GETTING LAST MEASUREMENT from DELTADORE_INTRUSION_SENSOR TYPE device in ORION (52ms) |
| Test Result | Passed |



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| Orion Context Broker Test | |
|---|---|
| ID | 43 |
| Title | Getting the Last Measurement of a specific Device from ORION Context Broker (NETATMO_AIR_QUALITY TYPE) |
| Description | The test checks that the last measurement sent by a specific device is present in the Context Broker. The device must have been previously registered on the platform otherwise if it doesn't, it would not be present within the Context Broker; the measurement must also have been previously sent.<br><br>Moreover, the User who makes the request must be aware of two parameters: the Fiware Service and the Fiware Service Path, as they must be sent together with the request for receiving the measurement, otherwise it will not be possible to obtain it. |
| Tested Interfaces | ORION Context Broker - *getDeviceLastMeasure* |
| Input Parameters | ○ Evita Device ID<br>○ Fiware Service<br>○ Fiware Service Path |
| Preconditions | The Device considered, which relates to a Cloud Service, must have been correctly registered in the e-VITA Platform. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- Device present in ORION and last measurement correctly retrieved<br><br>√ 43) GETTING LAST MEASUREMENT from NETATMO_AIR_QUALITY TYPE device in ORION (52ms) |
| Test Result | Passed |



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| Orion Context Broker Test | |
|---|---|
| ID | 44 |
| Title | Getting the Last Measurement of a specific Device from ORION Context Broker (NEU_BRAIN TYPE) |
| Description | The test checks that the last measurement sent by a specific device is present in the Context Broker. The device must have been previously registered on the platform otherwise if it doesn't, it would not be present within the Context Broker; the measurement must also have been previously sent.<br><br>Moreover, the User who makes the request must be aware of two parameters: the Fiware Service and the Fiware Service Path, as they must be sent together with the request for receiving the measurement, otherwise it will not be possible to obtain it. |
| Tested Interfaces | ORION Context Broker - *getDeviceLastMeasure* |
| Input Parameters | ○ Evita Device ID<br>○ Fiware Service<br>○ Fiware Service Path |
| Preconditions | The Device considered, which relates to a Cloud Service, must have been correctly registered in the e-VITA Platform. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- Device present in ORION and last measurement correctly retrieved<br><br>√ 44) GETTING LAST MEASUREMENT from NEU_BRAIN TYPE device in ORION (52ms) |
| Test Result | Passed |



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| Orion Context Broker Test | |
|---|---|
| ID | 45 |
| Title | Getting the Last Measurement of a specific Device from ORION Context Broker (NEU_TRAINING TYPE) |
| Description | The test checks that the last measurement sent by a specific device is present in the Context Broker. The device must have been previously registered on the platform otherwise if it doesn't, it would not be present within the Context Broker; the measurement must also have been previously sent.<br><br>Moreover, the User who makes the request must be aware of two parameters: the Fiware Service and the Fiware Service Path, as they must be sent together with the request for receiving the measurement, otherwise it will not be possible to obtain it. |
| Tested Interfaces | ORION Context Broker - *getDeviceLastMeasure* |
| Input Parameters | ○ Evita Device ID<br>○ Fiware Service<br>○ Fiware Service Path |
| Preconditions | The Device considered, which relates to a Cloud Service, must have been correctly registered in the e-VITA Platform. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- Device present in ORION and last measurement correctly retrieved<br><br>√ 45) GETTING LAST MEASUREMENT from NEU_TRAINING TYPE device in ORION (52ms) |
| Test Result | Passed |



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| Orion Context Broker Test | |
|---|---|
| ID | 46 |
| Title | Getting the Last Measurement of a specific Device from ORION Context Broker - Attributes Validation (Fiware Service or Fiware Service Path values incorrect or not entered). Example Tested Device Type: ENOCEAN_DOOR_SENSOR |
| Description | The test checks that the request to receive from the Context Broker the last measurement sent by a specific device, fails in case of Fiware Service or Fiware Service Path values incorrect or not entered.<br><br>The error code indicates the absence of the Device within the Context Broker, even if it has already been previously registered on the platform and even if a measurement has already been previously sent. |
| Tested Interfaces | ORION Context Broker - *getDeviceLastMeasure* |
| Input Parameters | ○ Evita Device ID<br>○ Fiware Service (absent or incorrect)<br>○ Fiware Service Path (absent or incorrect) |
| Preconditions | The Device considered must have already sent a measurement. |
| Expected Output | **404** Status Code |
| Test Execution Report | - STATUS CODE: 404<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- ATTRIBUTES VALIDATION correctly performed<br><br>- Device present in ORION and NOT retrieved<br><br>√ 46) GETTING LAST MEASUREMENT from a device in ORION - ATTRIBUTES VALIDATION (Fiware Service or Fiware Service Path values incorrect or not entered) (52ms) |
| Test Result | Passed |



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### 2.6.2 Interaction with MinIO Object Storage

This section of the document contains the integration tests which verify that the communication between the e-VITA platform and the MinIO Object Storage is successful. The tests therefore verify the correct cooperation between the different software components involved in this phase. This component is in charge of storing all the messages exchanged with the coaching devices (robots) and all the measurements and audio files sent by the devices registered on the platform.

| **MinIO Test** | |
|---|---|
| ID | **47** |
| Title | Getting the Bucket in the Object Storage (MinIO) associated with the User |
| Description | The test checks the correct integration between the e-VITA platform and the Object Storage (MinIO). Specifically, the test aims to verify the existence of a Bucket in MinIO containing the historical data of the devices associated with the user currently logged into the e-VITA platform.<br>The test fails if the Bucket associated with the User has not been correctly created in the Object Storage instance. |
| Tested Interfaces | Object Storage (MinIO) - *getBucket* |
| Input Parameters | ○ User ID |
| Preconditions | Existence of a User in the e-VITA platform and therefore of the relative bucket in MinIO. |
| Expected Output | **200** Status Code |
| Test Execution Report | `- TEST EXECUTION TIME: 20/7/2023, 17:19:03`<br>`- BUCKET in MinIO with UserID 904c8e04-d4ff-44c3-bbb0-f06ca7e563c3 EXISTS`<br>`√ 47) BUCKET associated with the USER in the Object Storage MinIO retrieving (178ms)` |
| Test Result | Passed |



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| MinIO Test | |
|---|---|
| ID | 48 |
| Title | Getting device's historical data stored within the Object Storage (MinIO) |
| Description | The test checks the correct integration between the e-VITA platform and the Object Storage (MinIO). Specifically, the test aims to verify that the messages exchanged between the user and a coaching device (robot) registered within the platform are correctly historicized within MinIO and easily obtainable. On the e-VITA platform it is also possible to download the *CSV* file containing the result.<br><br>It is not returned in case of wrong (or not present) Keycloack access token. In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | e-VITA Manager - *getHistorical* |
| Input Parameters | ○ Device ID<br>○ Start date<br>○ End date |
| Preconditions | Existence of a User in the e-VITA platform and therefore of the specific device. |
| Expected Output | **200** Status Code |
| Test Execution Report | - TEST EXECUTION TIME: 24/7/2023, 11:37:10<br><br>- HISTORICAL DATA CORRECTLY RETRIEVED<br><br>dateCreated,<br>response hallo,<br>2023-07-24 T09: 03: 02.002 Z,<br>"[{""recipient_id"":""64ba9cb6baf1e60f5d42f485_b554033b-1f4a-465c-b1f6-4b80ff7ebb52"",""text"":""Ciao User_tests, Buongiorno!""},{""recipient_id"":""64ba9cb6baf1e60f5d42f485_b554033b-1f4a-465c-b1f6-4b80ff7ebb52"",""text"":""Posso rispondere a domande su diversi ambiti, come l'esercizio fisico, il sonno, la sicurezza e l'alimentazione. Inoltre, sono in grado di informarvi sulle notizie, sulle previsioni del tempo e di rispondere alle domande di Wikipedia.""},{""recipient_id"":""64ba9cb6baf1e60f5d42f485_b554033b-1f4a-465c-b1f6-4b80ff7ebb52"",""text"":""Vorrebbe sapere come?""}]""can we talk in english?",<br>2023-07-24 T09: 03: 16.016 Z, |



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| | |
|---|---|
| | "[{""recipient_id"":""64ba9cb6baf1e60f5d42f485_b554033b-1f4a-465c-b1f6-4b80ff7ebb52"",""text"":""We can talk in english""}]""I want news",<br>2023-07-24 T09: 03: 25.025 Z,<br>"[{""recipient_id"":""64ba9cb6baf1e60f5d42f485_b554033b-1f4a-465c-b1f6-4b80ff7ebb52"",""text"":""Daily news feed is<br>here""},{""recipient_id"":""64ba9cb6baf1e60f5d42f485_b554033b-1f4a-465c-b1f6-4b80ff7ebb52"",""text"":""PROFILI Noah Okafor, il jolly offensivo che il Milan cercava da tempo, source<br>Diretta.""},{""recipient_id"":""64ba9cb6baf1e60f5d42f485_b554033b-1f4a-465c-b1f6-<br>4b80ff7ebb52"",""text"":""“Aumento significativo del diabete nei bambini durante la pandemia”: lo studio internazionale, source Il Fatto<br>Quotidiano.""},{""recipient_id"":""64ba9cb6baf1e60f5d42f485_b554033b-1f4a-465c-b1f6-<br>4b80ff7ebb52"",""text"":""Cina in crisi post Covid: crollo dei consumi, export in calo, record di disoccupazione giovanile, source Il Fatto<br>Quotidiano.""},{""recipient_id"":""64ba9cb6baf1e60f5d42f485_b554033b-1f4a-465c-b1f6-<br>4b80ff7ebb52"",""text"":""Did that help?""}]"<br>√ 48) HISTORICAL DATA retrieving (188ms) |
| Test Result | Passed |



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## 2.7 Interaction with RASA Dialogue Manager

This section of the document contains the integration tests which verify that the communication between the e-VITA platform and the Rasa Dialogue Manager is successful. The tests therefore verify the correct cooperation between the different software components involved in this phase.

| **Rasa Test** | |
|---|---|
| **ID** | **49** |
| **Title** | Sending Message to RASA Dialogue Manager. |
| **Description** | The test checks that communication between the e-VITA platform and the RASA Dialogue Manager takes place correctly. The test was performed by sending a message to RASA and verifying that the response is received successfully. |
| **Tested Interfaces** | RASA Dialogue Manager - *sendMessage* |
| **Input Parameters** | ○ Sender<br>○ Message |
| **Preconditions** | None |
| **Expected Output** | **200** Status Code |
| **Test Execution Report** | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- Message successfully SENT to Rasa. Answer RECEIVED:<br>- [{"recipient_id":"user1","text":"Hey! How are you?"}]<br>√ 49) SENDING MESSAGE to RASA (232ms) |
| **Test Result** | Passed |



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| Rasa Test | |
|---|---|
| ID | 50 |
| Title | Sending Message to RASA Dialogue Manager and receiving a response from a specific Device (GATEBOX TYPE). |
| Description | The test checks that a message sent by a coaching device (in this case a GATEBOX device type) is correctly sent by the e-VITA platform to the RASA Dialogue Manager; moreover, the test is considered passed if its response is successfully received from RASA.<br><br>The device must therefore have been previously registered on the e-VITA platform and in order to uniquely identify it, the device Id and the device Token are sent in the request. The actual message is sent in the request payload.<br><br>The response received will consist of the following format:<br><br>• the *recipient_id* field will contain the concatenation of the ID and token of the device that sent the message;<br>• the *text* field will contain the text answer message. |
| Tested Interfaces | Keycloak Identity Manager – *validateToken*<br><br>e-VITA Manager – *sendData*<br><br>RASA Dialogue Manager - *sendMessage* |
| Input Parameters | ○ Evita Device ID<br>○ Evita Device Token<br>○ Message |
| Preconditions | The Device considered for sending the message must have been previously registered. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- Response Message from RASA to the GATEBOX Device:<br><br>[{"recipient_id":"62431996e14a3727bdb236a7_7d658e7c-057f-4aa5-96f6-3864fd1e6b98","text":"Hey! How are you?"}]<br><br>√ 50) SENDING MESSAGE to RASA and RECEIVE a response from a specific Device (GATEBOX TYPE) (343ms) |
| Test Result | Passed |



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| Rasa Test | |
|---|---|
| ID | 51 |
| Title | Sending Message to RASA Dialogue Manager and receiving a response from a specific Device (NAO_ROBOT TYPE). |
| Description | The test checks that a message sent by a coaching device (in this case a NAO_ROBOT device type) is correctly sent by the e-VITA platform to the RASA Dialogue Manager; moreover, the test is considered passed if its response is successfully received from RASA.<br><br>The device must therefore have been previously registered on the e-VITA platform and in order to uniquely identify it, the device Id and the device Token are sent in the request. The actual message is sent in the request payload.<br><br>The response received will consist of the following format:<br><br>• the *recipient_id* field will contain the concatenation of the ID and token of the device that sent the message;<br>• the *text* field will contain the text answer message. |
| Tested Interfaces | Keycloak Identity Manager – *validateToken*<br><br>e-VITA Manager – *sendData*<br><br>RASA Dialogue Manager - *sendMessage* |
| Input Parameters | o Evita Device ID<br>o Evita Device Token<br>o Message |
| Preconditions | The Device considered for sending the message must have been previously registered. |
| Expected Output | **200** Status Code |
| Test Execution Report | `- STATUS CODE: 200`<br><br>`- TEST EXECUTION TIME: 20/7/2023, 17:19:03`<br><br>`- Response Message from RASA to the NAO_ROBOT Device:`<br><br>`[{"recipient_id":"62431996e14a3727bdb236a8_7d658e7c-057f-4aa5-96f6-3864fd1e6b98","text":"Hey! How are you?"}]`<br><br>`√ 51) SENDING MESSAGE to RASA and RECEIVE a response from a specific Device (NAO_ROBOT TYPE) (343ms)` |
| Test Result | Passed |



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| Rasa Test | |
|---|---|
| ID | 52 |
| Title | Sending Message to RASA Dialogue Manager and receiving a response from a specific Device (ANDROID_ROBOT TYPE). |
| Description | The test checks that a message sent by a coaching device (in this case an ANDROID_ROBOT device type) is correctly sent by the e-VITA platform to the RASA Dialogue Manager; moreover, the test is considered passed if its response is successfully received from RASA.<br><br>The device must therefore have been previously registered on the e-VITA platform and in order to uniquely identify it, the device Id and the device Token are sent in the request. The actual message is sent in the request payload.<br><br>The response received will consist of the following format:<br><br>• the *recipient_id* field will contain the concatenation of the ID and token of the device that sent the message;<br>• the *text* field will contain the text answer message. |
| Tested Interfaces | Keycloak Identity Manager – *validateToken*<br><br>e-VITA Manager – *sendData*<br><br>RASA Dialogue Manager - *sendMessage* |
| Input Parameters | o Evita Device ID<br>o Evita Device Token<br>o Message |
| Preconditions | The Device considered for sending the message must have been previously registered. |
| Expected Output | **200** Status Code |
| Test Execution Report | `- STATUS CODE: 200`<br><br>`- TEST EXECUTION TIME: 20/7/2023, 17:19:03`<br><br>`- Response Message from RASA to the ANDROID_ROBOT Device:`<br><br>`[{"recipient_id":"62431996e14a3727bdb236a9_7d658e7c-057f-4aa5-96f6-3864fd1e6b98","text":"Hey! How are you?"}]`<br><br>`√ 52) SENDING MESSAGE to RASA and RECEIVE a response from a specific Device (ANDROID_ROBOT TYPE) (343ms)` |
| Test Result | Passed |



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## 2.8 Notifications management

This section of the document contains the integration tests which verify that the creation of a new notification, relating to a coaching device registered by the user, is successful. This notification is placed in a message queue. A notification is related to a Reminder. The tests therefore verify the correct cooperation between the different software components involved in this phase.

| **Notification Tests** | |
|---|---|
| ID | 53 |
| Title | Notification Creation |
| Description | The test checks that a notification associated with a registered coaching device (robot) within e-VITA platform user is correctly created. It is not returned in case of wrong (or not present) Keycloack client credential access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - v*alidateToken*<br><br>e-VITA Manager – *send_notification* |
| Input Parameters | ○ Device ID<br>○ Device Token<br>○ Reminder Type<br>○ Reminder ID |
| Preconditions | Existence of a Client Credential Access Token specific for the Client in Keycloak.<br><br>Existence of the specific Device in the e-VITA Manager Platform.<br><br>Existence of the specific Reminder in the e-VITA Manager Platform. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- NOTIFICATION successfully created<br><br>{"notificationId":"64ba9cc4baf1e60f5d42f4a4","message":"EXTERNAL_time_for_checking_calender","type":"INTENT","deviceId":"64ba9cb6baf1e60f5d42f485","dateCreated":"2023-07-21T14:57:08+0000","reminderId":"000"}<br><br>√ 53) CREATE NOTIFICATION (125ms) |
| Test Result | Passed |



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| Notification Tests | |
|---|---|
| ID | 54 |
| Title | Notification retrieving |
| Description | The test checks that the first notification of the message queue (i.e. the notification sent first) related to the specific device, is correctly retrieved. It is not needed an access token to use this API. |
| Tested Interfaces | e-VITA Manager – *get_notification* |
| Input Parameters | o Device ID<br>o Device Token |
| Preconditions | Existence of the specific Device in the e-VITA Manager Platform. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- NOTIFICATION successfully retrieved<br>- {"notificationId":"64ba9cc4baf1e60f5d42f4a4","message":"EXTERNAL_time_for_checking_calender","type":"INTENT","deviceId":"64ba9cb6baf1e60f5d42f485","dateCreated":"2023-07-21T14:57:08+0000","reminderId":"000"}<br>√ 54) GETTING the FIRST NOTIFICATION of the queue (131ms) |
| Test Result | Passed |

| Notification Tests | |
|---|---|
| ID | 55 |
| Title | Notification deletion |



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| | |
|---|---|
| **Description** | The test checks that the specific notification is correctly deleted. It is not returned in case of wrong (or not present) Keycloack client credential access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| **Tested Interfaces** | Keycloak Identity Manager - v*alidateToken*<br><br>e-VITA Manager – *delete_notification* |
| **Input Parameters** | ○ Device ID |
| **Preconditions** | Existence of a Client credential Access Token specific for the Client in Keycloak.<br><br>Existence of the specific Device in the e-VITA Manager Platform . |
| **Expected Output** | **200** Status Code |
| **Test Execution Report** | - STATUS CODE: 404<br><br>- TEST EXECUTION TIME: 21/7/2023, 16:56:02<br><br>- NOTIFICATION correctly not present since deleted through the GET NOTIFICATION API<br><br>- {}<br><br>√ 55) DELETE NOTIFICATION (142ms) |
| **Test Result** | Passed |



Ministry of Internal Affairs and Communications, JAPAN

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## 2.9 Personal information management

This section of the document contains the integration tests which verify that the storing and management of the user's personal data (in terms of **eating habits, daily routines, exercising, social habits** and **coaching cycles**) is successful. The tests therefore verify the correct cooperation between the different software components involved in this phase.

| **Personal Information Tests** | |
|---|---|
| **ID** | **56** |
| **Title** | Eating habit Creation |
| **Description** | The test checks that the Eating habit information related to the e-VITA logged user, is correctly created. It is not returned in case of wrong (or not present) Keycloack access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| **Tested Interfaces** | Keycloak Identity Manager - *validateToken*<br><br>e-VITA Manager - *createEatingHabits* |
| **Input Parameters** | ○ User ID<br>○ numberOfMeals<br>○ cookingForOneself<br>○ lossOfAppetite<br>○ caloriesIntake |
| **Preconditions** | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform. |
| **Expected Output** | **200** Status Code |
| **Test Execution Report** | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- EATING HABITS successfully created<br><br>{"eatingHabitsId":{"timestamp":<br>1689951429,"date":1689951429000},<br>"evitaUserId":"b554033b-1f4a-465c-b1f6-<br>4b80ff7ebb52","numberOfMeals":3,<br>"cookingForOneself":true,"lossOfAppetite"<br>:false,"caloriesIntake":1200}<br><br>√ 56) CREATE USER'S EATING HABITS (141ms) |
| **Test Result** | Passed |



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| Personal Information Tests | |
|---|---|
| ID | 57 |
| Title | Daily routine Creation |
| Description | The test checks that the Daily routine information related to the e-VITA logged user, is correctly created. It is not returned in case of wrong (or not present) Keycloack access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - v*alidateToken*<br><br>e-VITA Manager - *createDailyRoutine* |
| Input Parameters | ○ User ID<br>○ dailyRoutine<br>- routineName<br>- time<br>- supportNeeded<br>- detail<br>- type |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- DAILY ROUTINE successfully created<br><br>{"dailyRoutinesId":{"timestamp":1689951429,"date":1689951429000},"evitaUserId":"b554033b-1f4a-465c-b1f6-4b80ff7ebb52","dailyRoutine":[{"routineName":"cooking","time":"morning","supportNeeded":true,"detail":"my cooking habits","type":"cooking"}]}<br><br>√ 57) CREATE USER'S DAILY ROUTINE (132ms) |
| Test Result | Passed |



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| Personal Information Tests | |
|---|---|
| ID | 58 |
| Title | Exercising Creation |
| Description | The test checks that the Exercising information related to the e-VITA logged user, is correctly created. It is not returned in case of wrong (or not present) Keycloack access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - v*alidateToken*<br><br>e-VITA Manager - *createExercising* |
| Input Parameters | o User ID<br>o adherenceToExerciseTraining<br>o motivationToDoExercises<br>o preferenceOfExerciseType<br>o bodyMovementsToAvoid |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br><br>- EXERCISING successfully created<br><br>{"exercisingId":{"timestamp":1689951429,"date" :1689951429000},"evitaUserId" :"b554033b-1f4a-465c-b1f6-4b80ff7ebb52","adherenceToExerciseTraining" :3,"motivationToDoExercises" :true,"preferenceOfExerciseType" :"squats","bodyMovementsToAvoid":"arm exercises"}<br><br>√ 58) CREATE USER'S EXERCISING (131ms) |
| Test Result | Passed |



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| Personal Information Tests | |
|---|---|
| ID | 59 |
| Title | Social Habit Creation |
| Description | The test checks that the Social Habit information related to the e-VITA logged user, is correctly created. It is not returned in case of wrong (or not present) Keycloak access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - v*alidateToken*<br><br>e-VITA Manager - *createSocialHabits* |
| Input Parameters | ○ User ID<br>○ participationInSocialActivities<br>○ feelingsOfLoneliness<br>○ feelOfBeingRedundant<br>○ livingCondition<br>○ employment<br>○ pastEmployment<br>○ lifePartner<br>○ livingArea<br>○ householdSize<br>○ owningPet<br>○ lifeEnjoyment<br>○ needPersonalCare<br>○ friendsAndRelativesContact<br>○ yearsOfRetirement<br>○ academicBackground<br>○ householdClassification<br>○ familyStructure<br>○ hobbies<br>○ habits |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform. |
| Expected Output | **200** Status Code |



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| | |
|---|---|
| Test Execution Report | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- SOCIAL HABITS successfully created<br>{"socialHabitsId":{"timestamp":1689951429,"date":1689951429000},"evitaUserId":"b554033b-1f4a-465c-b1f6-4b80ff7ebb52","participationInSocialActivities":true,"feelingsOfLoneliness":true,"feelOfBeingRedundant":true,"livingCondition":"Alone","employment":"Unemployed","pastEmployment":"not","lifePartner":"Partnered","livingArea":"Metropolitan","householdSize":114,"owningPet":true,"lifeEnjoyment":"Enjoying","needPersonalCare":false,"friendsAndRelativesContact":true,"yearsOfRetirement":"","academicBackground":"yes","householdClassification":"not","familyStructure":"3 members","hobbies":"cooking","habits":"running"}<br>√ 59) CREATE USER'S SOCIAL HABITS (154ms) |
| Test Result | Passed |

| **Personal Information Tests** | |
|---|---|
| ID | 60 |
| Title | Coaching Cycle Creation |
| Description | The test checks that the Coaching Cycle information related to the e-VITA logged user, is correctly created. It is not returned in case of wrong (or not present) Keycloak access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - *validateToken*<br><br>e-VITA Manager - *createCoachingCycle* |
| Input Parameters | o User ID<br>o coachingCycles<br>- domain<br>- assessCondition<br>- defineGoals<br>- implementAction<br>- evaluate<br>- readinessLevel<br>- currentStepInCycle<br>- selectedTopic<br>- notifications |



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| | |
|---|---|
| **Preconditions** | Existence of an Access Token specific for the User in Keycloak.<br>Existence of the specific User in the e-VITA Manager Platform. |
| **Expected Output** | **200** Status Code |
| **Test Execution Report** | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- COACHING CYCLE successfully created<br>{"userCoachingCycleId":{"timestamp":1689951429,"date":1689951429000},"evitaUserId":"b554033b-1f4a-465c-b1f6-4b80ff7ebb52","coachingCycles":[{"coachingCycleId":null,"domain":"INTENTACTIVITY_MONITORING","assessCondition":"condition","defineGoals":"goals","implementAction":"action","evaluate":"evaluation","readinessLevel":1,"currentStepInCycle":1,"selectedTopic":"topic","notifications":true}]}<br>√ 60) CREATE USER'S COACHING CYCLE (145ms) |
| **Test Result** | Passed |

| **Personal Information Tests** | |
|---|---|
| **ID** | **61** |
| **Title** | Eating habit retrieving |
| **Description** | The test checks that the Eating habit information related to the e-VITA logged user, is correctly retrieved. It is not returned in case of wrong (or not present) Keycloak access token.<br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| **Tested Interfaces** | Keycloak Identity Manager - *validateToken*<br>e-VITA Manager - get*EatingHabits* |
| **Input Parameters** | ○ User ID |
| **Preconditions** | Existence of an Access Token specific for the User in Keycloak.<br>Existence of the specific User in the e-VITA Manager Platform.<br>Existence of the User's Eating habit in the e-VITA Manager Platform. |



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| | |
|---|---|
| **Expected Output** | **200** Status Code |
| **Test Execution Report** | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>-EATING HABITS successfully retrieved [{"eatingHabitsId":{"timestamp": 1689951429,"date":1689951429000},"evitaUserId":"b554033b-1f4a-465c-b1f6-4b80ff7ebb52","numberOfMeals": 3,"cookingForOneself":true, "lossOfAppetite":false,"caloriesIntake":1200}]<br>√ 61) GETTING USER'S EATING HABITS (134ms) |
| **Test Result** | Passed |

| **Personal Information Tests** | |
|---|---|
| **ID** | **62** |
| **Title** | Daily routine retrieving |
| **Description** | The test checks that the Daily routine information related to the e-VITA logged user, is correctly retrieved. It is not returned in case of wrong (or not present) Keycloack access token.<br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| **Tested Interfaces** | Keycloak Identity Manager - v*alidateToken*<br>e-VITA Manager - *getDailyRoutine* |
| **Input Parameters** | o User ID |
| **Preconditions** | Existence of an Access Token specific for the User in Keycloak.<br>Existence of the specific User in the e-VITA Manager Platform.<br>Existence of the specific User's Daily routine in the e-VITA Manager Platform. |
| **Expected Output** | **200** Status Code |



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| | |
|---|---|
| Test Execution Report | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 20/7/2023, 17:19:03<br>- DAILY ROUTINE successfully retrieved<br>{"dailyRoutinesId":{"timestamp":1689951429,"date":1689951429000},"evitaUserId":"b554033b-1f4a-465c-b1f6-4b80ff7ebb52","dailyRoutine":[{"routineName":"cooking","time":"morning","supportNeeded":true,"detail":"my cooking habits","type":"cooking"}]}<br>√ 62) GETTING USER'S DAILY ROUTINE (131ms) |
| Test Result | Passed |

| **Personal Information Tests** | |
|---|---|
| ID | 63 |
| Title | Exercising retrieving |
| Description | The test checks that the Exercising information related to the e-VITA logged user, is correctly retrieved. It is not returned in case of wrong (or not present) Keycloack access token.<br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - *validateToken*<br>e-VITA Manager - *getExercising* |
| Input Parameters | o User ID |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br>Existence of the specific User in the e-VITA Manager Platform.<br>Existence of the specific User's Exercising in the e-VITA Manager Platform. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 21/7/2023, 16:56:03<br>-EXERCISING successfully retrieved [{"exercisingId":{"timestamp":1689951429,"date":1689951429000},"evitaUserId":"b554033b-1f4a-465c-b1f6-4b80ff7ebb52",<br>"adherenceToExerciseTraining" |



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| | |
|---|---|
| | :3,"motivationToDoExercises": true, "preferenceOfExerciseType" :"squats","bodyMovementsToAvoid" :"arm exercises"}]<br><br>√ 63) GETTING USER'S EXERCISING (197ms) |
| **Test Result** | Passed |

| **Personal Information Tests** | |
|---|---|
| **ID** | **64** |
| **Title** | Social Habit retrieving |
| **Description** | The test checks that the Social Habit information related to the e-VITA logged user, is correctly retrieved. It is not returned in case of wrong (or not present) Keycloak access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| **Tested Interfaces** | Keycloak Identity Manager - *validateToken*<br><br>e-VITA Manager - *getSocialHabits* |
| **Input Parameters** | o User ID |
| **Preconditions** | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform.<br><br>Existence of the specific User's Social Habit in the e-VITA Manager Platform. |
| **Expected Output** | **200** Status Code |
| **Test Execution Report** | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 21/7/2023, 16:56:03<br><br>-SOCIAL HABITS successfully retrieved [{"socialHabitsId":{"timestamp":1689951429,"date":1689951429000},"evitaUserId":"b554033b-1f4a-465c-b1f6-4b80ff7ebb52","participationInSocialActivities":true,"feelingsOfLoneliness":true,"feelOfBeingRedundant":true,"livingCondition":"Alone","employment":"Unemployed","pastEmployment":"not","lifePartner":"Partnered","livingArea":"Metropolitan","householdSize":114,"owningPet":true,"lifeEnjoyment":"Enjoying","needPersonalCare":false,"friendsAndRelativesContact":true,"yearsOfRetirement":"","academicBackground":"yes","household |



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| | |
|---|---|
| | dClassification":"not","familyStructure":"3 members","hobbies":"cooking","habits":"running"}]<br><br>√ 64) GETTING USER'S SOCIAL HABITS (137ms) |
| Test Result | Passed |

| Personal Information Tests | |
|---|---|
| ID | 65 |
| Title | Coaching Cycle retrieving |
| Description | The test checks that the Coaching Cycle information related to the e-VITA logged user, is correctly retrieved. It is not returned in case of wrong (or not present) Keycloak access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - *validateToken*<br><br>e-VITA Manager - *getCoachingCycle* |
| Input Parameters | ○ User ID |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform.<br><br>Existence of the specific User's Coaching Cycle in the e-VITA Manager Platform. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 21/7/2023, 16:56:03<br><br>- COACHING CYCLE successfully retrieved<br><br>{"userCoachingCycleId":{"timestamp":1689951429,"date":1689951429000},"evitaUserId":"b554033b-1f4a-465c-b1f6-4b80ff7ebb52","coachingCycles":[{"coachingCycleId":null,"domain":"INTENTACTIVITY_MONITORING","assessCondition":"condition","defineGoals":"goals","implementAction":"action","evaluate":"evaluation","readinessLevel":1,"currentStepInCycle":1,"selectedTopic":"topic","notifications":true}]}<br><br>√ 65) GETTING USER'S COACHING CYCLE (130ms) |
| Test Result | Passed |



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| Personal Information Tests | |
|---|---|
| ID | 66 |
| Title | Eating habit deletion |
| Description | The test checks that the Eating habit information related to the e-VITA logged user, is correctly deleted. It is not returned in case of wrong (or not present) Keycloak access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - v*alidateToken*<br><br>e-VITA Manager - delete*EatingHabits* |
| Input Parameters | ○ User ID |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform.<br><br>Existence of the User's Eating habit in the e-VITA Manager Platform. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 21/7/2023, 16:56:03<br><br>- EATING HABITS successfully deleted<br>[{"eatingHabitsId":{"timestamp":<br>1689951429,"date":1689951429000},"evitaUserId":"b554033b-<br>1f4a-465c-b1f6-4b80ff7ebb52","numberOfMeals":3,<br>"cookingForOneself":true,<br>"lossOfAppetite":false,"caloriesIntake":1200}]<br><br>√ 66) DELETING USER'S EATING HABITS (183ms) |
| Test Result | Passed |



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| Personal Information Tests | |
|---|---|
| ID | 67 |
| Title | Daily routine deletion |
| Description | The test checks that the Daily routine information related to the e-VITA logged user, is correctly deleted. It is not returned in case of wrong (or not present) Keycloack access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - v*alidateToken*<br><br>e-VITA Manager - *deleteDailyRoutine* |
| Input Parameters | o User ID |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform.<br><br>Existence of the specific User's Daily routine in the e-VITA Manager Platform. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 21/7/2023, 16:56:04<br><br>- DAILY ROUTINE successfully deleted<br><br>[{"dailyRoutinesId":{"timestamp":1689951429,"date":1689951429000},"evitaUserId":"b554033b-1f4a-465c-b1f6-4b80ff7ebb52","dailyRoutine":[{"routineName":"cooking","time":"morning","supportNeeded":true,"detail":"my cooking habits","type":"cooking"}]}]<br><br>√ 67) DELETING USER'S DAILY ROUTINE (130ms) |
| Test Result | Passed |



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| Personal Information Tests | |
|---|---|
| ID | 68 |
| Title | Exercising deletion |
| Description | The test checks that the Exercising information related to the e-VITA logged user, is correctly deleted. It is not returned in case of wrong (or not present) Keycloack access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - *validateToken*<br><br>e-VITA Manager - *deleteExercising* |
| Input Parameters | o User ID |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform.<br><br>Existence of the specific User's Exercising in the e-VITA Manager Platform. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 21/7/2023, 16:56:04<br><br>-EXERCISING successfully deleted [{"exercisingId":{"timestamp":1689951429,"date":1689951429000},"evitaUserId":"b554033b-1f4a-465c-b1f6-4b80ff7ebb52","adherenceToExerciseTraining":3,"motivationToDoExercises":true,"preferenceOfExerciseType":"squats","bodyMovementsToAvoid":"arm exercises"}]<br><br>√ 68) DELETING USER'S EXERCISING (158ms) |
| Test Result | Passed |



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| Personal Information Tests | |
|---|---|
| ID | 69 |
| Title | Social Habit deletion |
| Description | The test checks that the Social Habit information related to the e-VITA logged user, is correctly deleted. It is not returned in case of wrong (or not present) Keycloak access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - *validateToken*<br><br>e-VITA Manager - *deleteSocialHabits* |
| Input Parameters | o User ID |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform.<br><br>Existence of the specific User's Social Habit in the e-VITA Manager Platform. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 21/7/2023, 16:56:04<br><br>- SOCIAL HABITS successfully deleted<br><br>[{"socialHabitsId":{"timestamp":1689951429,"date":1689951429000},"evitaUserId":"b554033b-1f4a-465c-b1f6-4b80ff7ebb52","participationInSocialActivities":true,"feelingsOfLoneliness":true,"feelOfBeingRedundant":true,"livingCondition":"Alone","employment":"Unemployed","pastEmployment":"not","lifePartner":"Partnered","livingArea":"Metropolitan","householdSize":114,"owningPet":true,"lifeEnjoyment":"Enjoying","needPersonalCare":false,"friendsAndRelativesContact":true,"yearsOfRetirement":"","academicBackground":"yes","householdClassification":"not","familyStructure":"3 members","hobbies":"cooking","habits":"running"}]<br><br>√ 69) DELETING USER'S SOCIAL HABITS (141ms) |
| Test Result | Passed |



Ministry of Internal Affairs and Communications, JAPAN

The project has received funding from the European Union H2020 Programme under grant agreement n° 101016453. The Japanese consortium received funding by the Japanese Ministry of Internal Affairs and Communication (MIC).

| Personal Information Tests | |
|---|---|
| ID | 70 |
| Title | Coaching Cycle deletion |
| Description | The test checks that the Coaching Cycle information related to the e-VITA logged user, is correctly deleted. It is not returned in case of wrong (or not present) Keycloak access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - v*alidateToken*<br><br>e-VITA Manager - *deleteCoachingCycle* |
| Input Parameters | ○ User ID |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform.<br><br>Existence of the specific User's Coaching Cycle in the e-VITA Manager Platform. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 21/7/2023, 16:56:04<br><br>-COACHING CYCLE successfully deleted [{"userCoachingCycleId":{"timestamp":1689951429,"date":1689951429000},"evitaUserId":"b554033b-1f4a-465c-b1f6-4b80ff7ebb52","coachingCycles":[{"coachingCycleId":null,"domain":"INTENTACTIVITY_MONITORING","assessCondition":"condition","defineGoals":"goals","implementAction":"action","evaluate":"evaluation","readinessLevel":1,"currentStepInCycle":1,"selectedTopic":"topic","notifications":true}]}]<br><br>√70) DELETING USER'S COACHING CYCLE (142ms) |
| Test Result | Passed |



Ministry of Internal Affairs and Communications, JAPAN

The project has received funding from the European Union H2020 Programme under grant agreement n° 101016453. The Japanese consortium received funding by the Japanese Ministry of Internal Affairs and Communication (MIC).

## 2.10 Leaderboard management

This section of the document contains the integration tests which verify that the leaderboard data is managed successfully. These rankings show the number of **steps** taken daily by each user, sorted in descending order. The tests therefore verify the correct cooperation between the different software components involved in this phase.

| **Leaderboard Tests** | |
|---|---|
| ID | 71 |
| Title | Leaderboard retrieving |
| Description | The test checks that the Leaderboard information is correctly retrieved. This Leaderboard takes in consideration the logged user, in order to highlight him in the table. It is not returned in case of wrong (or not present) Keycloak access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - *validateToken*<br><br>e-VITA Manager - *getGamesUserInfo* |
| Input Parameters | ○ User ID |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 21/7/2023, 16:56:04<br><br>- LEADERBOARD INFO correctly retrieved<br><br>[{"userCompetitionScoreId":"64ba2289baf1e60f5d42daad", "username":"Keiko","highlight":false,"rank":1,"region" :"JP","country":"JP","studyCenter":null,"achievement": 5899,"distance":0},{"userCompetitionScoreId":"64ba2289 baf1e60f5d42daae","username":"RyanBrowne2020","highlig ht":false,"rank":2,"region":"JP","country":"JP","study Center":null,"achievement":5899,"distance":0},{"userCo mpetitionScoreId":"64ba2289baf1e60f5d42daaf","username ":"rsaintalme","highlight":false,"rank":3,"region":"EU ","country":"FR","studyCenter":null,"achievement":5899 ,"distance":0},{"userCompetitionScoreId":"64ba2289baf1 e60f5d42dab0","username":"user_test","highlight":false ,"rank":4,"region":"EU","country":"IT","studyCenter":n ull,"achievement":5899,"distance":0},{"userCompetition ScoreId":"64ba2289baf1e60f5d42dab1","username":"test_m |



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| | |
|---|---|
| | inioEU5","highlight":false,"rank":5,"region":"EU","country":"IT","studyCenter":null,"achievement":5899,"distance":0},{"userCompetitionScoreId":"64ba2289baf1e60f5d42dab2","username":"evita_user","highlight":false,"rank":6,"region":"EU","country":"IT","studyCenter":"TOKYO","achievement":5899,"distance":0},{"userCompetitionScoreId":"64ba2289baf1e60f5d42dab3","username":"User_tests","highlight":true,"rank":7,"region":"EU","country":"IT","studyCenter":"ANCONA","achievement":5899,"distance":0},{"userCompetitionScoreId":"64ba2289baf1e60f5d42dab4","username":"Caritas07","highlight":false,"rank":8,"region":"EU","country":"DE","studyCenter":"COLOGNE","achievement":405,"distance":248},{"userCompetitionScoreId":"64ba2289baf1e60f5d42dab5","username":"Caritas_01","highlight":false,"rank":9,"region":"EU","country":"DE","studyCenter":"COLOGNE","achievement":247,"distance":177},{"userCompetitionScoreId":"64ba2289baf1e60f5d42dab6","username":"Caritas06","highlight":false,"rank":10,"region":"EU","country":"DE","studyCenter":"COLOGNE","achievement":193,"distance":254}]<br>√ 71) LEADERBOARD INFO (245ms) |
| **Test Result** | Passed |

| **Leaderboard Tests** | |
|---|---|
| **ID** | **72** |
| **Title** | Leaderboard EU vs JP retrieving |
| **Description** | The test checks that the Leaderboard information about EU vs JP is correctly retrieved. This represents a competition between the two platforms. This Leaderboard takes in consideration the logged user, in order to highlight him in the table. It is not returned in case of wrong (or not present) Keycloak Client credential access token.<br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| **Tested Interfaces** | Keycloak Identity Manager - *validateToken*<br>e-VITA Manager - *getGamesUserInfoEUvsJP* |
| **Input Parameters** | None |
| **Preconditions** | Existence of a Client credential Access Token specific for the Client in Keycloak. |



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| | |
|---|---|
| **Expected Output** | **200** Status Code |
| **Test Execution Report** | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 21/7/2023, 16:56:04<br>- LEADERBOARD INFO EU vs JP correctly retrieved<br>{"userCompetitionScoreId":"64ba2289baf1e60f5d42daad","username":"Keiko","highlight":false,"rank":1,"region":"EU","country":"FR","studyCenter":null,"achievement":42249,"distance":799}<br>√ 72) LEADERBOARD INFO EU vs JP (122ms) |
| **Test Result** | Passed |



Ministry of Internal Affairs and Communications, JAPAN

The project has received funding from the European Union H2020 Programme under grant agreement n° 101016453. The Japanese consortium received funding by the Japanese Ministry of Internal Affairs and Communication (MIC).

## 2.11 Interaction with Social platform

This section of the document contains the integration tests which verify that the communication between the e-VITA platform and the Social Platform is successful. The tests therefore verify the correct cooperation between the different software components involved in this phase.
The tests shown concern the possible operations on the *Post* entity of the Social Platform. The same services are also present in the e-VITA platform for the *Space, Profile, Content container, Content, Content tag* and *Calendar entry* entities, which being similar entities, the tests are not reported.

| **Social Platform Tests** | |
|---|---|
| ID | 73 |
| Title | Social Platform's Post Creation |
| Description | The test checks that the Social Platform's Post associated with the e-VITA logged user is correctly created. It is not returned in case of wrong (or not present) Keycloack access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - *validateToken*<br><br>e-VITA Manager – *createPost* |
| Input Parameters | ○ idPost<br>○ message<br>○ url<br>○ created_at<br>○ created_by<br>○ updated_at<br>○ updated_by |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 21/7/2023, 16:56:05<br><br>- USER POST correctly created<br><br>{"id":5,"evitaUserId":"b554033b-1f4a-465c-b1f6-4b80ff7ebb52","message":"Kunstim Rampenlicht","url":"https://url.com","created_by":8,"created_at":"2021-12-12 13:52:04","updated_by":8,"updated_at":"2021-12-12 14:05:39"}<br><br>√ 73) USER POST CREATION (142ms) |
| Test Result | Passed |



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The project has received funding from the European Union H2020 Programme under grant agreement n° 101016453. The Japanese consortium received funding by the Japanese Ministry of Internal Affairs and Communication (MIC).

| Social Platform Tests | |
|---|---|
| ID | 74 |
| Title | Social Platform's Posts retrieving |
| Description | The test checks that the list of Posts related to the e-VITA logged user is correctly retrieved. It is not returned in case of wrong (or not present) Keycloack access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - *validateToken*<br><br>e-VITA Manager - *getPosts* |
| Input Parameters | None |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 21/7/2023, 16:56:05<br><br>- USER POSTS correctly retrieved<br><br>[{"id":1,"evitaUserId":"b554033b-1f4a-465c-b1f6-4b80ff7ebb52","message":"cc","url":"cc","created_by":1,"created_at":"cc","updated_by":1,"updated_at":"cc"},{"id":5,"evitaUserId":"b554033b-1f4a-465c-b1f6-4b80ff7ebb52","message":"Kunst im Rampenlicht","url":"https://url.com","created_by":8,"created_at":"2021-12-12 13:52:04","updated_by":8,"updated_at":"2021-12-12 14:05:39"}]<br><br>√ 74) GETTING USER POSTS (117ms) |
| Test Result | Passed |



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| Social Platform Tests | |
|---|---|
| ID | 75 |
| Title | Social Platform's specific Post retrieving |
| Description | The test checks that the Post related to the e-VITA logged user is correctly retrieved. It is not returned in case of wrong (or not present) Keycloack access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - *validateToken*<br><br>e-VITA Manager - *getPost* |
| Input Parameters | ○ Post ID |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform.<br><br>Existence of the specific User's Post in the e-VITA Manager Platform. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 21/7/2023, 16:56:05<br><br>- USER SINGLE POST correctly retrieved<br><br>{"id":5,"evitaUserId":"b554033b-1f4a-465c-b1f6-4b80ff7ebb52","message":"Kunst im Rampenlicht","url":"https://url.com","created_by":8,"created_at":"2021-12-12 13:52:04","updated_by":8,"updated_at":"2021-12-12 14:05:39"}<br><br>√ 75) GETTING SINGLE USER POST (136ms) |
| Test Result | Passed |



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| Social Platform Tests | |
|---|---|
| ID | 76 |
| Title | Social Platform's Post update |
| Description | The test checks that the specific passed Post associated with the e-VITA logged user is correctly updated. It is not returned in case of wrong (or not present) Keycloack access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - v*alidateToken*<br><br>e-VITA Manager - *putPost* |
| Input Parameters | ○ idPost<br>○ message<br>○ url<br>○ created_at<br>○ created_by<br>○ updated_at<br>○ updated_by |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform.<br><br>Existence of the specific User's Post in the e-VITA Manager Platform. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 21/7/2023, 16:56:05<br><br>- USER POST correctly updated<br><br>{"id":5,"evitaUserId":"b554033b-1f4a-465c-b1f6-4b80ff7ebb52","message":"Kunst im Rampenlicht - updated","url":"https://url.com","created_by": 8,"created_at":"2021-12-12 13:52:04","updated_by": 8,"updated_at":"2021-12-12 14:05:39"}<br><br>√ 76) UPDATING USER POST (124ms) |
| Test Result | Passed |



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| Social Platform Tests | |
|---|---|
| ID | 77 |
| Title | Social Platform's Post deletion |
| Description | The test checks that the specific passed Post associated with the e-VITA logged user is correctly deleted. It is not returned in case of wrong (or not present) Keycloack access token.<br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - *validateToken*<br>e-VITA Manager - *deletePost* |
| Input Parameters | ○ Post ID |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br>Existence of the specific User in the e-VITA Manager Platform.<br>Existence of the specific User's Post in the e-VITA Manager Platform. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 21/7/2023, 16:56:05<br>- USER SINGLE POST correctly deleted<br>{"id":5,"evitaUserId" :"b554033b-1f4a-465c-b1f6-4b80ff7ebb52","message" :"Kunst im Rampenlicht - updated","url":"https://url.com", "created_by":8,"created_at":"2021-12-12 13:52:04","updated_by":8,"updated_at":"2021-12-12 14:05:39"}<br>√ 77) DELETING USER SINGLE POST (140ms) |
| Test Result | Passed |



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## 2.12 Interaction with Data Fusion

This section of the document contains the integration tests which verify that the communication between the e-VITA platform and the Data Fusion component is successful. The tests therefore verify the correct cooperation between the different software components involved in this phase.

| **Data Fusion Tests** | |
|---|---|
| ID | 78 |
| Title | Data Fusion Labels Creation |
| Description | The test checks that the labels produced by the Data Fusion component and related with the e-VITA logged user, are correctly created. It is not returned in case of wrong (or not present) Keycloack Client credential access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - *validateToken*<br><br>e-VITA Manager - *createDataFusionLabels* |
| Input Parameters | ○ User ID<br>○ Data Fusion output labels |
| Preconditions | Existence of a Client credential Access Token specific for the Client in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 21/7/2023, 16:56:05<br><br>- DATA FUSION LABELS correctly created<br><br>id":"64ba9cc8baf1e60f5d42f4aa","userId":"b554033b-1f4a-465c-b1f6-4b80ff7ebb52","label":{"aggregationTime":48,"random":0.7499927458232599,"games":{"steps":5899},"aggregatedLabels":{"gait":{"walk":0.4,"run":0,"sit":0.1,"lay":0.4,"stand":0.1}},"isHome":"true","labels":{"gait":"sit","homeActivity":"TV","gaitMetric":0.1,"lay":0.4,"lastMessageSentiment":[0.1,0.2,0.7]}},"createdAt":"2023-07-21T14:57:12+0000"}<br><br>√ 78) DATA FUSION LABELS creation (130ms) |
| Test Result | Passed |



Ministry of Internal Affairs and Communications, JAPAN

The project has received funding from the European Union H2020 Programme under grant agreement n° 101016453. The Japanese consortium received funding by the Japanese Ministry of Internal Affairs and Communication (MIC).

| Data Fusion Tests | |
|---|---|
| ID | 79 |
| Title | Data Fusion Labels retrieving |
| Description | The test checks that the list of Data Fusion labels related to the e-VITA logged user is correctly retrieved. It is not returned in case of wrong (or not present) Keycloack access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - *validateToken*<br><br>e-VITA Manager - *getDataFusionLabels* |
| Input Parameters | None |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 21/7/2023, 16:56:05<br><br>- DATA FUSION LABELS correctly retrieved<br><br>[{"id":"64af91e9c9d8135f1921ecc4","userId":"b554033b-1f4a-465c-b1f6-4b80ff7ebb52","label":{"aggregationTime":48,"random":0.7499927458232599,"games":{"steps":5899},"aggregatedLabels":{"gait":{"walk":0.4,"run":0,"sit":0.1,"lay":0.4,"stand":0.1}},"isHome":"true","labels":{"gait":"sit","homeActivity":"TV","gaitMetric":0.1,"lay":0.4,"lastMessageSentiment":[0.1,0.2,0.7]}},"createdAt":"2023-07-13T05:55:53+0000<br><br>√ 79) GETTING DATA FUSION LABELS (185ms) |
| Test Result | Passed |



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The project has received funding from the European Union H2020 Programme under grant agreement n° 101016453. The Japanese consortium received funding by the Japanese Ministry of Internal Affairs and Communication (MIC).

| Data Fusion Tests | |
|---|---|
| ID | 80 |
| Title | Data Fusion Labels deletion |
| Description | The test checks that all the Data Fusion labels associated with the e-VITA logged user, are correctly deleted. It is not returned in case of wrong (or not present) Keycloack access token.<br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - v*alidateToken*<br>e-VITA Manager - *deleteDataFusionLabels* |
| Input Parameters | None |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br>Existence of the specific User in the e-VITA Manager Platform. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 21/7/2023, 16:56:05<br>- DATA FUSION LABELS correctly deleted<br>√ 80) DELETING DATA FUSION LABELS (658ms) |
| Test Result | Passed |



The project has received funding from the European Union H2020 Programme under grant agreement n° 101016453. The Japanese consortium received funding by the Japanese Ministry of Internal Affairs and Communication (MIC).

## 2.13 Interaction with Emotion detection system

This section of the document contains the integration tests which verify that the communication between the e-VITA platform and the Emotion detection component is successful. The tests therefore verify the correct cooperation between the different software components involved in this phase.

| **Emotion Detection Tests** | |
|---|---|
| **ID** | **81** |
| **Title** | Audio file storing |
| **Description** | The test checks that the Audio file associated with a coaching device (robot) registered on the e-VITA platform, is correctly stored. It is not stored in case of wrong input parameters. This API does not provide access token authentication.<br><br>The file sent to the platform is stored within MinIO Object Storage to then allow the analysis of the audio by the Emotion detection component later.<br><br>The file formats accepted by the service are as follows: audio/wave, audio/wav, audio/x-wav, audio/x-pn-wav. |
| **Tested Interfaces** | e-VITA Manager – *send_file* |
| **Input Parameters** | ○ Device ID<br>○ Device Token<br>○ File |
| **Preconditions** | Existence of the User in the e-VITA Manager Platform who previously registered the specific device. |
| **Expected Output** | **202** Status Code |
| **Test Execution Report** | - STATUS CODE: 202<br>- TEST EXECUTION TIME: 21/7/2023, 16:56:05<br>- AUDIO FILE correctly stored<br>√ 81) SEND FILE (142ms) |
| **Test Result** | Passed |



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| Emotion Detection Tests | |
|---|---|
| ID | 82 |
| Title | Emotion retrieving |
| Description | The test checks that the emotions relating to an audio file previously sent to the platform and associated with a coaching device (robot) registered on the e-VITA platform, is correctly retrieved. Internally, the service queries the emotion detection component to obtain the *label* that identifies the emotion detected in the audio. The service returns the user's emotions in the sense that it returns the emotions detected and relating to each device belonging to that user in an array.<br><br>It is not returned in case of wrong (or not present) Keycloack access token. In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | e-VITA Manager – *getUserEmotions* |
| Input Parameters | None |
| Preconditions | Existence of the User in the e-VITA Manager Platform who previously registered the specific device. |
| Expected Output | 200 Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 21/7/2023, 16:56:05<br><br>- USER EMOTIONS correctly retrieved<br>[<br>{<br>"id": "64be3dcebaf1e60f5d43b4df",<br>"userId": "b554033b-1f4a-465c-b1f6-4b80ff7ebb52",<br>"deviceId": "64ba9cb6baf1e60f5d42f485",<br>"language": "it",<br>"file": "64ba9cb6baf1e60f5d42f485_1690189255993_yes-hahahaa.wav",<br>"detectedEmotion": "fear",<br>"createdAt": "2023-07-24T09:01:02+0000"<br>}<br>]<br>√ 82) USER EMOTIONS (142ms) |
| Test Result | Passed |



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## 2.14 Admin management

This section of the document contains the integration tests which verify that the operations that a user with the **ADMIN role** can perform, are successful. The tests therefore verify the correct cooperation between the different software components involved in this phase.

| **Admin Tests** | |
|---|---|
| **ID** | **83** |
| **Title** | User Assignment |
| **Description** | The test checks that the assignment of a generic user to a user with the role of *human_coach, is* correctly and successfully completed. The *human_coach* user will then be enabled to manage the data of the user assigned to him. It is not returned in case of wrong (or not present) Keycloack access token.In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| **Tested Interfaces** | Keycloak Identity Manager - *validateToken*<br>e-VITA Manager - post*UserAssignment* |
| **Input Parameters** | ○ User ID<br>○ Human Coach User ID |
| **Preconditions** | Existence of an Access Token specific for the User in Keycloak.<br>Existence of the two specific Users in the e-VITA Manager Platform. |
| **Expected Output** | **200** Status Code |
| **Test Execution Report** | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 21/7/2023, 16:56:06<br>- USER correctly assigned<br>[{"id":"bc34c308-e7b1-4072-a6db-7d864f0ada41","country":"IT","city":"Naples","language":"it","gender":"Female","username":"evita_user","hasNetatmoToken":false, "hasStrapiToken":false,"hasOuraringToken":false,"hasHuaweiToken": false, "modifiedBy":"bc34c308-e7b1-4072-a6db-7d864f0ada41","fiwareService":"bc34c308_e7b1_4072_a6db_7d864f0ada41","telegramUsername":"","createdAt":"2023-05-22T15:36:00+0000","modifiedAt":"2023-07-05T11:01:40+0000","age":0,"studyCenter":"TOKYO","emailReminder":"","phoneReminder":"","rasaUrl":null}]<br>√ 83) USER ASSIGNMENT (138ms) |
| **Test Result** | Passed |



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| Admin Tests | |
|---|---|
| ID | 84 |
| Title | Users Assigned retrieving |
| Description | The test checks that all generic users assigned to a user with the role of *human_coach, are* correctly retrieved. It is not returned in case of wrong (or not present) Keycloack access token.<br><br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - *validateToken*<br><br>e-VITA Manager - get*UserAssignment* |
| Input Parameters | ○ Human Coach User ID |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br><br>Existence of the specific User in the e-VITA Manager Platform.<br><br>Existence of the specific Human Coach User in the e-VITA Manager Platform. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br><br>- TEST EXECUTION TIME: 21/7/2023, 16:56:06<br><br>- USERS ASSIGNED correctly retrieved<br><br>[{"id":"bc34c308-e7b1-4072-a6db-7d864f0ada41","country":"IT","city":"Naples","language":"it","gender":"Female","username":"evita_user","hasNetatmoToken":false,"hasStrapiToken":false,"hasOuraringToken":false,"hasHuaweiToken":false,"modifiedBy":"bc34c308-e7b1-4072-a6db-7d864f0ada41","fiwareService":"bc34c308_e7b1_4072_a6db_7d864f0ada41","telegramUsername":"","createdAt":"2023-05-22T15:36:00+0000","modifiedAt":"2023-07-05T11:01:40+0000","age":0,"studyCenter":"TOKYO","emailReminder":"","phoneReminder":"","rasaUrl":null}]<br><br>√ 84) GETTING USERS ASSIGNED (148ms) |
| Test Result | Passed |



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| Admin Tests | |
|---|---|
| ID | 85 |
| Title | Single User assigned deletion |
| Description | The test checks that a generic user assigned to a user with the role of *human_coach, is* correctly deleted. It is not returned in case of wrong (or not present) Keycloack access token.<br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - v*alidateToken*<br>e-VITA Manager - *deleteUserAssignment* |
| Input Parameters | ○ Human Coach User ID<br>○ User ID |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br>Existence of the specific User in the e-VITA Manager Platform.<br>Existence of the two specific Human Coach and generic Users in the e-VITA Manager Platform. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 21/7/2023, 16:56:06<br>- SINGLE USER correctly deleted FROM USERS ASSIGNED<br>√ 85) DELETING SINGLE USER ASSIGNED (193ms) |
| Test Result | Passed |



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| Admin Tests | |
|---|---|
| ID | 86 |
| Title | User assigned deletion |
| Description | The test checks that all the generic users assigned to a user with the role of *human_coach,* are correctly deleted. It is not returned in case of wrong (or not present) Keycloack access token.<br>In this case, in fact, the returned error code indicates that the user is not authorized to obtain the information. |
| Tested Interfaces | Keycloak Identity Manager - v*alidateToken*<br>e-VITA Manager - *deleteUserAssignment* |
| Input Parameters | ○ Human Coach User ID |
| Preconditions | Existence of an Access Token specific for the User in Keycloak.<br>Existence of the specific User in the e-VITA Manager Platform.<br>Existence of the specific Human Coach User in the e-VITA Manager Platform. |
| Expected Output | **200** Status Code |
| Test Execution Report | - STATUS CODE: 200<br>- TEST EXECUTION TIME: 21/7/2023, 16:56:06<br>- ALL USERS correctly deleted FROM USERS ASSIGNED<br>√ 86) DELETING ALL USERS ASSIGNED (140ms) |
| Test Result | Passed |



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# 3 Conclusion and Outlook

This deliverable reports the integration tests of the main components of e-VITA platform. The integration tests allowed to validate the correct interaction between devices (e.g., sensors and coaching system) and the components of the platform and among the platform components themselves.
The tests concern real services and interfaces exposed by the components of the e-VITA platform and this validation is therefore a crucial step in the development of the system and his lifecycle.

The tests included in this deliverable covers different categories of interactions including authentication and authorisation, device management, data transmission and storage and dialog management.

The set of tests reported validates the main interfaces of all the services implemented within the platform. It is to be considered exhaustive and it enriches the set of tests reported in the previous version of the deliverable, the D7.3 (e-VITA, 2022), considering the improvements in terms of new added devices and new components developed and integrated.



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