

SUNSHINE



Services and functions test

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Introduction

This document contains a schema for testing the client/server SUNSHINE services. For the sake of simplicity not all the methods exposed by the service infrastructure are listed in the schema, however it is obviously that the test will imply the verification of all the needed methods (i.e. For SOS it could be needed to test DescribeSensors, GetResult GetObservation).

1 Scenario 1

1.1 Group Test 1 – Data availability

The objective of the following test items is to check the availability of spatial data for the pilot cities involved in the scenario 1; spatial data are representing the footprint of buildings, having attributes defined in accordance with INSPIRE “Buildings” data specifications. In particular, the “age of construction”, “height” and “use” are mandatory for running the estimation of Energy Performance with the algorithm implemented in the SUNSHINE project with focus on buildings with residential use.

Test #	Description	Test operation		Ferrara	Trento + Val di Non	Naxxar	Lamia
1.1.1	Check availability of WMS layers for the scenario 1 pilot cities	Browse the list of layers of buildings available on the Sunshine Geoserver “demo” and click on one of them. Geoserver Openlayers client opens showing the corresponding WMS layer.	Result	OK	OK	OK	OK
			Date	15/12/2015	15/12/2015	15/12/2015	15/12/2015
1.1.2	Check data structure	With the Geoserver OL client, click on one or more spatial feature (buildings). Tabular data (attributes) appear below	Result	OK	OK	OK	OK
			Date	15/12/2015	15/12/2015	15/12/2015	15/12/2015

1.1.3	Download data	Using the Geoserver demo page, browse the list of catalogued layers and select WFS>SHP/ZIP to download the dataset	Result	OK	OK	OK	OK
			Date	15/12/2015	15/12/2015	15/12/2015	15/12/2015

1.2 Group Test 2 – Data completeness/correctness

The objective of the following test items is to check functionalities for updating attributes of buildings with missing data about age of construction, height and use. Data are updated using the map4data mobile app, connected via WFS-T protocol to the SUNSHINE Geoserver, to edit/save data on the project database. The buildings to be updated should have missing information about age of construction, height and use (at least one of them missing), thus also having the estimation of energy performance void.

Test #	Description	Test operation		Ferrara	Trento + Val di Non	Naxxar	Lamia
1.2.1	Verify data completeness	Open the downloaded dataset (T1.3) with a desktop GIS (e.g. QGIS) and check how many buildings are missing data about age of construction, height and use	Result	OK	OK	OK	OK
			Date	15/12/2015	15/12/2015	15/12/2015	15/12/2015
1.2.2	Download and install map4data	From the Google store download and install the map4data mobile app (on Android device). After installation, login with credentials provided for the pilot city.	Result	OK	OK	OK	OK
			Date	15/12/2015	15/12/2015	15/12/2015	15/12/2015

1.2.3	Add/update data of selected buildings	Using the map4data mobile app, select the first building to be updated (T2.2): the colour of the building is RED. Open the attribute form to enter all the missing/correct data for the mandatory attributes (age of construction, height and use); submit: the colour of the buildings turns into GREEN. Repeat for 10 other buildings.	Result	OK	OK	OK	OK
			Date	15/12/2015	15/12/2015	15/12/2015	15/12/2015

1.3 Group Test 3 – Estimation of Energy Performance

The objective of the following test items is to check if the buildings with updated data (group test 2) are now also containing the estimation of energy performance. This test has to be performed by users with administrator credentials, in order to launch the process on-the-fly (the process is automatically scheduled once a day).

Test #	Description	Test operation		Ferrara	Trento + Val di Non	Naxxar	Lamia
1.3.1	Run the calculation of EP	Run the algorithm for updating the EP estimation of the buildings considered in T2.2-T2.4	Result	OK	OK	OK	OK
			Date	15/12/2015	15/12/2015	15/12/2015	15/12/2015

1.3.2	Open the energy map	Browse the list of layers of buildings “energy” available on the Sunshine Geoserver “demo” and click on one of them. Geoserver Openlayers client opens showing the corresponding WMS layer; zoom in in the area of buildings with data updated. The map is showing estimated EP for the updated buildings.	Result	OK	OK	OK	OK
			Date	15/12/2015	15/12/2015	15/12/2015	15/12/2015

1.4 Group Test 4 – Energy Map visualization/use

Test #	Description	Test operation		Ferrara	Trento + Val di Non	Naxxar	Lamia
4.1	Energy Maps statistic summary	Open the web client, select the relevant energy map and verify the existence of statistic summary.	Result	OK	OK	OK	OK
			Date	15/12/2015	15/12/2015	15/12/2015	15/12/2015
4.2	Energy Maps 3D KML model	Go back to the energy map and verify the existence of 3D representation of buildings.	Result	OK	OK	OK	OK
			Date	15/12/2015	15/12/2015	15/12/2015	15/12/2015
4.3	Energy Maps building detail	Click on a 3D building and verify that a pop-up screen appears with detailed building information. Verify building information are what expected.	Result	OK	OK	OK	OK
			Date	15/12/2015	15/12/2015	15/12/2015	15/12/2015

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2 Scenario 2

2.1 Group Test 1 – Data availability and access

Test #	Description	Test operation	Result	Date
2.1.1	Authentication	Open the client and log in with user credentials. Verify to have access to the data of the user corresponding to the credentials.	web client OK	14/12/2015
			energy app OK	14/12/2015
2.1.2	Change credentials	Only for Web Client, continuing the previous test, request a password change to client. Verify the existence of a notification message describing the positive outcome of the operation. Log out and log in again with the new password. Verify to have access to the data of the user corresponding to the credentials.	web client OK	14/12/2015

2.1.1 Pilot in Ferrara

2.1.1.1	Data availability for FER-001	Call a DescribeSensor request for all the procedures involved with the building and verify that: <ul style="list-style-type: none"> - The service returns without error - The procedures has one or more offerings 	OK	14/12/2015
		Open the Sunshine dashboard listing the offering status. Verify that all offering involved with the building are loaded with data.	OK	14/12/2015
2.1.1.2	Data availability	DescribeSensor	OK	14/12/2015

	for FER-002	Offering status	Data available up to 31/03/2015 due to faulty optical reader	29/01/2016
2.1.1.3	Data availability for FER-003	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.1.1.4	Data availability for FER-004	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.1.1.6	Data availability for FER-006	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.1.1.7	Data availability for FER-007	DescribeSensor	OK	14/12/2015
		Offering status	Data available up to 29/06/2015 due to faulty optical reader	29/01/2016
2.1.1.8	Data availability for FER-008	DescribeSensor	OK	14/12/2015
		Offering status	Data available up to 20/02/2015 due to faulty optical reader	29/01/2016
2.1.1.9	Data availability for FER-009	DescribeSensor	OK	14/12/2015
		Offering status	Data available	29/01/2016

			up to 09/06/2015 due to faulty optical reader	
2.1.1.10	Data availability for FER-010	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.1.1.11	Data availability for FER-011	DescribeSensor	OK	14/12/2015
		Offering status	Data available up to 01/04/2015 due to faulty optical reader	29/01/2016
2.1.1.12	Data availability for FER-012	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.1.1.13	Data availability for FER-013	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.1.1.14	Data availability for FER-014	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.1.1.15	Data availability for FER-015	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.1.1.16	Data availability for FER-016	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.1.1.17	Data availability for FER-017	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.1.1.18	Data availability for FER-018	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015

2.1.1.19	Data availability for FER-019	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.1.1.20	Data availability for FER-020	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.1.1.21	Data availability for FER-021	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.1.1.22	Data availability for FER-022	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.1.1.23	Data availability for Weather Observations	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.1.1.24	Data availability for Weather Forecasts	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015

2.1.2 Pilot in Croatia

2.1.2.1	Data availability HRV-001-002-003	Call a DescribeSensor request for all the procedures involved with the building and verify that: <ul style="list-style-type: none"> - The service returns without error - The procedures has one or more offerings 	OK	21/12/2015
		Open the Sunshine dashboard listing the offering status. Verify that all offering involved with the building are loaded with data.	OK	22/12/2015
2.1.2.2	Data availability HRV-004-005-006	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.2.3	Data availability HRV-007-009	DescribeSensor	OK	21/12/2015
		Offering status	OK Heating data not	29/01/2016

			available (HRV-008)	
2.1.2.4	Data availability HRV-010-011-012	DescribeSensor	OK	21/12/2015
		Offering status	OK	29/01/2016
2.1.2.5	Data availability HRV-013-014-015	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.2.6	Data availability HRV-016-017-018 HRV-019	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.2.7	Data availability HRV-020-021-022	DescribeSensor	OK	21/12/2015
		Offering status	OK	29/01/2016
2.1.2.8	Data availability HRV-023-024-025	DescribeSensor	OK	21/12/2015
		Offering status	OK	29/01/2016
2.1.2.9	Data availability for Weather Observations	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.2.10	Data availability for Weather Forecasts	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015

2.1.3 Pilot in Lamia

2.1.3.1	Data availability LAM-001-002	Call a DescribeSensor request for all the procedures involved with the building and verify that: <ul style="list-style-type: none"> - The service returns without error - The procedures has one or more offerings 	OK	21/12/2015
		Open the Sunshine dashboard listing the offering status. Verify that all offering involved with the building are loaded with data.	OK	22/12/2015
2.1.3.2	Data availability	DescribeSensor	OK	21/12/2015

	LAM-003-004	Offering status	OK	22/12/2015
2.1.3.3	Data availability LAM-005-006	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.3.4	Data availability LAM-007-008	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.3.5	Data availability LAM-009-010	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.3.6	Data availability for Weather Observations	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.3.7	Data availability for Weather Forecasts	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015

2.1.4 Pilot in Naxxar

2.1.4.1	Data availability PAO-001	Call a DescribeSensor request for all the procedures involved with the building and verify that: <ul style="list-style-type: none"> - The service returns without error - The procedures has one or more offerings 	OK	21/12/2015
		Open the Sunshine dashboard listing the offering status. Verify that all offering involved with the building are loaded with data.	OK	22/12/2015
2.1.4.2	Data availability PAO-002	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.4.3	Data availability for Weather Observations	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.4.4	Data availability	DescribeSensor	OK	21/12/2015

	for Weather Forecasts	Offering status	OK	22/12/2015
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2.1.5 Pilot in Trentino

2.1.5.1	Data availability TRN-T/001	Call a DescribeSensor request for all the procedures involved with the shelter and verify that: <ul style="list-style-type: none"> - The service returns without error - The procedures has one or more offerings 	OK	21/12/2015
		Open the Sunshine dashboard listing the offering status. Verify that all offering involved with the shelter are loaded with data.	OK	22/12/2015
2.1.5.2	Data availability TRN-T/002	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.3	Data availability TRN-T/003	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.4	Data availability TRN-T/004	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.5	Data availability TRN-T/005	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.6	Data availability TRN-T/006	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.7	Data availability TRN-T/007	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.8	Data availability TRN-T/008	DescribeSensor	OK	21/12/2015
		Offering status	Data available up to 30/03/2015	29/01/2016

			due to data transmission fault	
2.1.5.9	Data availability TRN-T/009	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.10	Data availability TRN-T/010	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.11	Data availability TRN-T/011	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.13	Data availability TRN-T/013	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.14	Data availability TRN-T/014	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.15	Data availability TRN-T/015	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.16	Data availability TRN-T/016	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.17	Data availability TRN-T/017	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.18	Data availability TRN-T/018	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.19	Data availability TRN-T/019	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.20	Data availability TRN-T/020	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.21	Data availability	DescribeSensor	OK	21/12/2015

	TRN-T/021	Offering status	OK	22/12/2015
2.1.5.22	Data availability TRN-T/022	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.23	Data availability TRN-T/023	DescribeSensor	OK	21/12/2015
		Offering status	Data available up to 19/03/2015 due to data transmission fault	29/01/2016
2.1.5.25	Data availability TRN-T/025	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.26	Data availability TRN-T/026	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.27	Data availability TRN-T/027	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.28	Data availability TRN-T/028	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.29	Data availability TRN-T/029	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.30	Data availability TRN-T/030	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.32	Data availability TRN-T/032	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.33	Data availability TRN-T/033	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.34	Data availability	DescribeSensor	OK	21/12/2015

	TRN-T/034	Offering status	OK	22/12/2015
2.1.5.35	Data availability TRN-T/035	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.36	Data availability TRN-T/036	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.37	Data availability TRN-T/037	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.38	Data availability TRN-T/038	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.39	Data availability TRN-T/039	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.40	Data availability TRN-T/040	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.41	Data availability TRN-T/041	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.42	Data availability TRN-T/042	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.43	Data availability TRN-T/043	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.44	Data availability TRN-T/044	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.45	Data availability TRN-T/045	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.47	Data availability TRN-T/047	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.48	Data availability	DescribeSensor	OK	21/12/2015

	TRN-T/048	Offering status	OK	22/12/2015
2.1.5.49	Data availability TRN-T/049	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.50	Data availability TRN-T/050	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.51	Data availability TRN-T/051	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.52	Data availability TRN-T/052	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.53	Data availability TRN-T/053	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.54	Data availability TRN-T/054	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.55	Data availability TRN-T/055	DescribeSensor	OK	21/12/2015
		Offering status	Data available up to 20/03/2015 due to data transmission fault	29/01/2016
2.1.5.56	Data availability TRN-T/056	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.57	Data availability TRN-T/057	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.58	Data availability TRN-T/058	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.59	Data availability	DescribeSensor	OK	21/12/2015

	TRN-T/059	Offering status	OK	22/12/2015
2.1.5.60	Data availability TRN-T/060	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.61	Data availability for Weather Observations	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.5.62	Data availability for Weather Forecasts	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015

2.1.6 Pilot in Val di Non

2.1.6.1	Data availability VDN-006 to 013	Call a DescribeSensor request for all the procedures involved with the building and verify that: <ul style="list-style-type: none"> - The service returns without error - The procedures has one or more offerings 	OK	21/12/2015
		Open the Sunshine dashboard listing the offering status. Verify that all offering involved with the building are loaded with data.	OK	29/01/2016
2.1.6.2	Data availability for Weather Observations	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.1.6.3	Data availability for Weather Forecasts	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015

2.2 Group Test 2 – Suggestion service for buildings

Test #	Description	Test operation	Result	Date
2.2.1	Input new comfort profile	Open the client, authenticate with credentials valid for Scenario 2 and go to the Comfort Profile page. Create a new profile and verify the existence of the new profile in the profiles list.	web client OK	14/12/2015
			energy app OK	14/12/2015
2.2.2	Modify comfort profile	Go to the Comfort Profile page. Select the profile created in the previous test and modify it. Verify the profile appears with modifications in the profiles list.	web client OK	14/12/2015
			energy app OK	14/12/2015
2.2.3	Verify execution of suggestion estimation	<p>Ensure that a comfort profile is set for the day following the test and that weather forecast data is available for the same day.</p> <p>Provided these conditions are met, verify that the suggestion estimation is executed and the output stored in the corresponding offering (indoor temperature profile, on/off profile).</p>	OK	14/12/2015

2.2.1 Pilot in Ferrara

2.2.1.12	Suggestion availability for FER-S12	Call a DescribeSensor request for all the procedures involved with the building and verify that: <ul style="list-style-type: none"> - The service returns without error - The procedures has one or more offerings 	OK	14/12/2015
		Open the Sunshine dashboard listing the offering status. Verify that all offering involved with the building are loaded with data.	OK	14/12/2015

2.2.1.13	Suggestion availability for line FER-S13	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.2.1.14	Suggestion availability for line FER-S14	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.2.1.15	Suggestion availability for line FER-S15	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.2.1.18	Suggestion availability for line FER-S18	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.2.1.19	Suggestion availability for line FER-S19	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.2.1.21	Suggestion availability for line FER-S21	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.2.1.22	Suggestion availability for line FER-S22	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015

2.2.2 Pilot in Croatia

2.2.1.2	Suggestion availability for HRV-S02	Call a DescribeSensor request for all the procedures involved with the building and verify that: <ul style="list-style-type: none"> - The service returns without error - The procedures has one or more offerings 	OK	21/12/2015
		Open the Sunshine dashboard listing the offering status. Verify that all offering involved with the building are loaded with data.	OK	22/12/2015
2.2.1.5	Suggestion availability for line HRV-S05	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015

2.2.1.11	Suggestion availability for line HRV-S11	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.2.1.14	Suggestion availability for line HRV-S14	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.2.1.17	Suggestion availability for line HRV-S17	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.2.1.21	Suggestion availability for line HRV-S21	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015
2.2.1.24	Suggestion availability for line HRV-S24	DescribeSensor	OK	21/12/2015
		Offering status	OK	22/12/2015

2.2.3 Pilot in Val di Non

2.2.1.2	Suggestion availability for VDN-S06	Call a DescribeSensor request for all the procedures involved with the building and verify that: <ul style="list-style-type: none"> - The service returns without error - The procedures has one or more offerings 	OK	29/01/2016
		Open the Sunshine dashboard listing the offering status. Verify that all offering involved with the building are loaded with data.	OK	29/01/2016

2.3 Group Test 3 – Suggestion service for shelters

Test #	Description	Test operation	Result	Date
2.3.1	Input new threshold set	Open the client, authenticate with credentials valid for Trentino pilot and go to the Threshold Setting page. Create a new set and verify its existence in the threshold list.	web client OK	14/12/2015
			energy app OK	14/12/2015
2.3.2	Modify threshold set	Go to the Threshold Setting page. Select the set created in the previous test and modify it. Verify the set appears with modifications in the threshold list.	web client OK	14/12/2015
			energy app OK	14/12/2015
2.3.3	Verify execution of suggestion estimation	<p>Ensure that a threshold set is provided for the day following the test and that weather forecast data is available for the same day.</p> <p>Provided these conditions are met, verify that the suggestion estimation is executed and the output stored in the corresponding offering (indoor temperature profile, heating usage #, cooling usage #).</p>	OK	14/12/2015

2.3.1 Pilot in Trentino

2.3.1.1	Data availability TRN-S01	Call a DescribeSensor request for all the procedures involved with the shelter and verify that: <ul style="list-style-type: none"> - The service returns without error - The procedures has one or more offerings 	OK	14/12/2015
		Open the Sunshine dashboard listing the offering status. Verify that all offering involved with the shelter are loaded with data.	OK	14/12/2015

2.3.1.2	Data availability TRN-S02	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.3	Data availability TRN-S03	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.4	Data availability TRN-S04	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.5	Data availability TRN-S05	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.6	Data availability TRN-S06	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.7	Data availability TRN-S07	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.8	Data availability TRN-S08	DescribeSensor	OK	14/12/2015
		Offering status	Suggestion unavailable due to missing input data	29/01/2016
2.3.1.9	Data availability TRN-S09	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.10	Data availability TRN-S10	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.11	Data availability TRN-S11	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.13	Data availability TRN-S13	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.14	Data availability	DescribeSensor	OK	14/12/2015

	TRN-S14	Offering status	OK	14/12/2015
2.3.1.15	Data availability TRN-S15	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.16	Data availability TRN-S16	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.17	Data availability TRN-S17	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.18	Data availability TRN-S18	DescribeSensor	OK	14/12/2015
		Offering status	OK	
2.3.1.19	Data availability TRN-S19	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.20	Data availability TRN-S20	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.21	Data availability TRN-S21	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.22	Data availability TRN-S22	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.23	Data availability TRN-S23	DescribeSensor	OK	14/12/2015
		Offering status	Suggestion unavailable due to missing input data	29/01/2016
2.3.1.25	Data availability TRN-S25	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.26	Data availability TRN-S26	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015

2.3.1.27	Data availability TRN-S27	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.28	Data availability TRN-S28	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.29	Data availability TRN-S29	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.30	Data availability TRN-S30	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.32	Data availability TRN-S32	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.33	Data availability TRN-S33	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.34	Data availability TRN-S34	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.35	Data availability TRN-S35	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.36	Data availability TRN-S36	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.37	Data availability TRN-S37	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.38	Data availability TRN-S38	DescribeSensor	OK	
		Offering status	OK	14/12/2015
2.3.1.39	Data availability TRN-S39	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.40	Data availability TRN-S40	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015

2.3.1.41	Data availability TRN-S41	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.42	Data availability TRN-S42	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.43	Data availability TRN-S43	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.44	Data availability TRN-S44	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.45	Data availability TRN-S45	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.47	Data availability TRN-S47	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.48	Data availability TRN-S48	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.49	Data availability TRN-S49	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.50	Data availability TRN-S50	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.51	Data availability TRN-S51	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.52	Data availability TRN-S52	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.53	Data availability TRN-S53	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.54	Data availability TRN-S54	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015

2.3.1.55	Data availability TRN-S55	DescribeSensor	OK	14/12/2015
		Offering status	Suggestion unavailable due to missing input data	29/01/2016
2.3.1.56	Data availability TRN-S56	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.57	Data availability TRN-S57	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.58	Data availability TRN-S58	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.59	Data availability TRN-S59	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015
2.3.1.60	Data availability TRN-S60	DescribeSensor	OK	14/12/2015
		Offering status	OK	14/12/2015

3 Scenario 3

3.1 Group Test 1 – Data availability and access

Test #	Description	Test operation	Result	Date
3.1.1	Authentication with Energy App	Open the client and log in with user credentials. Verify to have access to the light lines of the user corresponding to the credentials.	web client OK	01/12/2015
			Energy app OK	01/12/2015
3.1.2	Authentication with Web Client	Only for the Web Client, continuing the previous test, request a password change to client. Verify the existence of a notification message describing the positive outcome of the operation. Log out and log in again with the new password. Verify to have access to the light lines of the user corresponding to the credentials.	web client OK	16/12/2015
3.1.3	WFS service listing features of interest	Browse the list of WFS available on the Sunshine Geoserver and verify the existence of the layer sunshine:featureofinterest. Call it and verify its content.	OK	01/12/2015

3.1.1 Pilot in Bassano

3.1.1.1	Data availability for BAS-1xx	Call a DescribeSensor request for all the procedures involved with the line and verify that: <ul style="list-style-type: none"> - The service returns without error - The procedures has one or more offerings 	OK	21/12/2015
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		Open the Sunshine dashboard listing the offering status. Verify that all offering involved with the line are loaded with data.		
3.1.1.2	Data availability for BAS-2xx	DescribeSensor	OK	21/12/2015
		Offering status	OK Lamp 220: data available up to 04/08/2015 due to data transmission fault	29/01/2016
3.1.1.3	Data availability for BAS-3xx	DescribeSensor	OK	21/12/2015
		Offering status	OK Lamp 313: data available up to 22/05/2015 due to data transmission fault	29/01/2016

3.1.2 Pilot in Croatia

3.1.2.26	Data availability for HRV-026	Call a DescribeSensor request for all the procedures involved with the line and verify that: <ul style="list-style-type: none"> - The service returns without error - The procedures has one or more offerings 	OK	21/12/2015
		Open the Sunshine dashboard listing the offering status. Verify that all offering involved with the line are loaded with data.	OK	29/01/2016

3.1.3 Pilot in Rovereto

3.1.3.1	Data availability for ROV-1xx	Call a DescribeSensor request for all the procedures involved with the line and verify that: <ul style="list-style-type: none"> - The service returns without error - The procedures has one or more offerings 	OK	21/12/2015
		Open the Sunshine dashboard listing the offering status. Verify that all offering involved with the line are loaded with data.	OK	29/01/2016
3.1.3.2	Data availability for ROV-2xx	DescribeSensor	OK	21/12/2015
		Offering status	OK	29/01/2016

3.1.4 Pilot in Val di Non

3.1.4.5	Data availability for VDN-005	Call a DescribeSensor request for all the procedures involved with the line and verify that: <ul style="list-style-type: none"> - The service returns without error - The procedures has one or more offerings 	OK	21/12/2015
		Open the Sunshine dashboard listing the offering status. Verify that all offering involved with the line are loaded with data.	OK	22/12/2015

3.2 Group Test 2 – Lamp grouping

Test #	Description	Test operation	Result	Date
3.2.1	Create new group with Web Client	Open the client, authenticate with credentials valid for Scenario 3 and go to the Lamp Grouping page. Create a new group and verify the existence of the new group in the group list.	web client OK	02/12/2015
			Energy app OK	02/12/2015
3.2.2	Retrieve group information with Web Client	Go to the Lamp Grouping page and select the lamp group created in the previous test. Verify the retrieval and visualization of the related information and its correctness.	web client OK	02/12/2015
			Energy app OK	02/12/2015
3.2.3	Delete group with Web Client	Go to the Lamp Grouping page and select the lamp group created in the previous test. Verify the actual deletion of the group from the group list.	web client OK	02/12/2015
			Energy app OK	02/12/2015

3.3 Group Test 3 – Lamp control (scheduled)

3.3.1 Pilot in Bassano – Reverberi technology

Test #	Description	Test operation	Result				Date
				Single lamp	Physical group (quadro)	Virtual group	
3.3.1.1	Input schedule from Web Client	Open the client, authenticate with credentials valid for Bassano and go to the Lamp Scheduling page. Create a new lamp schedule and verify the existence of the new schedule in the schedule list.	web client	OK	OK	OK	29/01/2016
			Energy app	OK	OK	OK	02/12/2015
3.3.1.2	Transmit the schedule to pilot control system	Access to the instance of Reverberi's Maestro DB governing lamp control in Bassano and verify that the commands scheduled in the previous test are properly translated into the Maestro DB according to what is described in the Lamp Control Service document.		OK	OK	OK	03/12/2015

		to the Lamp Schedule List page. Delete the schedule created in the previous test and verify its disappearance from the schedule list.	Energy app	OK	OK	OK	02/12/2015
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3.3.2 Pilot in Rovereto – PowerOne technology

Test #	Description	Test operation	Result				Date
				Single lamp	Physical group (quadro)	Virtual group	
3.3.2.1	Input schedule from Energy App	Open the client, authenticate with credentials valid for Rovereto and go to the Lamp Scheduling page. Create a new lamp schedule and verify the existence of the new schedule in the schedule list.	web client	OK	OK	OK	02/12/2015
			Energy app	OK	OK	OK	02/12/2015
3.3.2.2	Transmit the schedule to pilot control system	Access to the pilot's DB governing lamp control in Rovereto and verify that the commands scheduled in the previous test are properly translated into the pilot's DB according to what is described in the Lamp Control Service document.		OK	OK	OK	02/12/2015

3.3.2.3	Delete schedule from Energy App	Open the client, authenticate with credentials valid for Rovereto and go to the Lamp Schedule List page. Delete the schedule created in the previous test and verify its disappearance from the schedule list.	web client	OK	OK	OK	02/12/2015
			Energy app	OK	OK	OK	02/12/2015

3.4 Group Test 4 – Lamp control (real-time)

3.4.1 Pilot in Bassano – Reverberi technology

Test #	Description	Test operation	Result				Date
				Single lamp	Physical group (quadro)	Virtual group	
3.4.1.1	Input DIMMING command from Energy App	Open the Energy App, authenticate with credentials valid for Bassano and go to the Lamp real-time command page. Send a DIMMING command and verify its acceptance from the system.	Energy app	OK	OK	OK	02/12/2015
3.4.1.2	Transmit DIMMING command to pilot control system	Access to the instance of Reverberi's Maestro DB governing lamp control in Bassano and verify that the command sent in the previous test is properly translated into the Maestro DB.		OK	OK	OK	02/12/2015
3.4.1.3	Input RESET command from Energy App	Open the Energy App, authenticate with credentials valid for Bassano and go to the Lamp real-time command page. Send a RESET command and verify its acceptance	Energy app	OK	OK	OK	02/12/2015

		from the system.					
3.4.1.4	Transmit RESET command to pilot control system	Access to the instance of Reverberi's Maestro DB governing lamp control in Bassano and verify that the command sent in the previous test is properly translated into the Maestro DB.		OK	OK	OK	02/12/2015

3.4.2 Pilot in Rovereto – PowerOne technology

Test #	Description	Test operation	Result				Date
				Single lamp	Physical group (quadro)	Virtual group	
3.4.2.1	Input CONNECT command from Energy App	Open the Energy App, authenticate with credentials valid for Rovereto and go to the Lamp real-time command page. Send a CONNECT command and verify its acceptance from the system.	Energy app	OK	OK	OK	02/12/2015
3.4.2.2	Transmit CONNECT command to pilot control system	Access to the pilot's DB governing lamp control in Rovereto and verify that the command sent in the previous test is properly translated into the pilot's DB.		OK	OK	OK	02/12/2015

3.4.2.3	Input DIMMING command from Energy App	Open the Energy App, authenticate with credentials valid for Rovereto and go to the Lamp real-time command page. Send a DIMMING command and verify its acceptance from the system.	Energy app	OK	OK	OK	02/12/2015
3.4.2.4	Transmit DIMMING command to pilot control system	Access to the pilot's DB governing lamp control in Rovereto and verify that the command sent in the previous test is properly translated into the pilot's DB.		OK	OK	OK	02/12/2015
3.4.2.5	Input RESET command from Energy App	Open the Energy App, authenticate with credentials valid for Rovereto and go to the Lamp real-time command page. Send a RESET command and verify its acceptance from the system.	Energy app	OK	OK	OK	02/12/2015
3.4.2.6	Transmit RESET command to pilot control system	Access to the pilot's DB governing lamp control in Rovereto and verify that the command sent in the previous test is properly translated into the pilot's DB.		OK	OK	OK	02/12/2015
3.4.2.7	Input DISCONNECT	Open the Energy App, authenticate with credentials valid for Rovereto	Energy	OK	OK	OK	02/12/2015

	command from Energy App	and go to the Lamp real-time command page. Send a DISCONNECT command and verify its acceptance from the system.	app				
3.4.2.8	Transmit DISCONNECT command to pilot control system	Access to the pilot's DB governing lamp control in Rovereto and verify that the command sent in the previous test is properly translated into the pilot's DB.		OK	OK	OK	02/12/2015