



SmartE - SE4YH SMART ENERGY FOR YOUR HOME REQUIREMENTS DEFINITION DOCUMENT

Version 1.0

Smart Energy for Your Home	Version: 1.0
Acceptance Plan Document	Date: 2015-12-31

Revision History

Date	Version	Description	Author
2015-11-29	0.1	Initial Draft	Nathan Chape
2015-12-30	0.2	3.2. Test cases added	Elena Kyorova
2015-12-31	0.3	Add Acceptance tests	Eugen Družin
2015-12-31	0.4	Introduction, Test plan	Nathan Chape
2015-12-31	0.5	Add Acceptance tests	Eugen Družin
2015-12-31	1.0	First version completed.	Nathan Chape

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1 Introduction

1.1 Purpose of this document

The purpose of this document is to outline the acceptance test procedure for the SmartE product. It contains the test plan, testing items, testing environment and acceptance tests. These tests will be used to verify that the product meets the requirements as outlined in the RSD.

1.2 Document organization

The document is organized as follows:

- Section 1, *Introduction*, describes contents of this guide, used documentation during developing process etc.
- Section 2, *Test Plan*, describes the testing process and environment.
- Section 3, *Acceptance Tests*, describes the test cases.

1.3 Intended Audience

- SmartE Development Team
- Supervisors
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1.4 Scope

The scope of this document is limited to the testing procedures and process for the SmartE product.

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1.5 Definitions and acronyms

1.5.1 Definitions

Keyword	Definitions
SmartE	Name of the SE4YH product.
SE4YH User	The user who will use the SE4YH System.
openHab	Framework for working smart devices.

1.5.2 Acronyms and abbreviations

Acronym or abbreviation	Definitions
SE4YH	Smart Energy for Your Home
FER	Faculty of Electrical Engineering and Computing, University of Zagreb
MDH	Mälardalen Högskola, Sweden

1.6 Documents

[PPD]	Project Plan document
[DD]	Design Description document
[RSD]	Requirements Specification document

2. Test Plan

2.1 Test items

The items that will be tested:

- Client application
 - The user will solely be using the client application for testing.

2.2 Features to be tested

The features that will be tested:

- **Login:**
 - The user will test the login features.
- **Add device:**
 - The user will test whether they can add a new device to the SmartE application.
- **List devices:**
 - The user tests whether they can see a list of devices - or not, if there are no devices available.
- **Selection of device:**
 - The user tests whether they can select a device from the list.
- **Perform action with device:**

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- The user tests whether valid actions (of a selected device) are presented and can be performed.
- **Create rule:**
 - The user tests whether they can create a rule and apply it to one or more devices.

A more detailed description of the testing procedure pertaining these features can be found in *Section 3 Acceptance tests*.

2.3 Test deliverables

The following items must be delivered in order to perform the acceptance test.

- Acceptance test plan
- Client application

2.4 Testing tasks

The tasks that are required for testing are:

- Installation of client application
- Acceptance test list:
 - The user performs the tests as listed in *Section 3 Acceptance tests*
- Acceptance test report:
 - The results of the test are recorded in the acceptance test report.

2.5 Environmental needs

The environmental needs are as follows:

- an android platform (preferably a smart phone) on which to install the client

2.6 Test case criteria

In *Section 3 Acceptance tests* each test has specific criteria which must be fulfilled in order for the test to be passed.

3 Acceptance tests

3.1 Login test

Test ID	1.0
Test Name	Login test
User Story ID	UC1
Precondition	Application installed. User is not logged in.
Main Path	<ol style="list-style-type: none"> 1. Start Application 2. Type in a valid username 3. Type in a valid password 4. Enable automatic login (optional)

	5. Click login button
Expected Result	As a user I can log in to the application.

Test ID	1.1
Test Name	Logout test
User Story ID	US1
Description	User wants to be able to log out from application.
Precondition	User is successfully logged in application.
Main Path	1. User chooses "Logout" section in navigation drawer
Expected Result	Server provides message for successful logout and user sees Login screen.

Test ID	2.1
Test Name	Adding device
User Story ID	US3
Description	A user should be able to add a new device, that is automatically detected to application.
Precondition	User is successfully logged in application and there is a new device to be detected.
Main Path	<ol style="list-style-type: none"> 1. The device is recognized as a new one. 2. Confirmation dialog is displayed if the device should be added. 3. User confirms.
Alternative Path	<ol style="list-style-type: none"> 1. User performs search for new devices. 2. The device is recognized as a new one. 3. Confirmation dialog is displayed if the device should be added. 4. User confirms
Expected Result	Device is added and can be managed/controlled by application.

Test ID	3.1
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Test Name	Listing all devices
User Story ID	US4
Description	A user should be to see a list of all devices that are added and there are devices which are already added.
Precondition	User is successfully logged in application.
Main Path	1. User chooses "View all devices"
Expected Result	All available devices are displayed.

Test ID	3.2
Test Name	Listing all devices (no devices are presented)
User Story ID	US4
Description	A user should be to see a list of all devices that are added and there are no devices already added
Precondition	User is successfully logged in application.
Main Path	1. User chooses "View all devices"
Expected Result	Informative message is displayed.

Test ID	4.1
Test Name	Selecting a smart device from a list of devices
User Story ID	US5
Description	A user should be able to select a device from a list of devices
Precondition	User is successfully logged in application.
Main Path	<ol style="list-style-type: none"> 1. User chooses "List all devices" 2. User chooses a device from selected group.
Alternative Path	<ol style="list-style-type: none"> 1. User chooses a group of devices. 2. User chooses a device from selected group.
Expected Result	The chosen device status can be seen.

Test ID	5.1
Test Name	The list of smart devices can be filtered by specified criteria
User Story ID	US6
Description	A user should be able to filter the list of all devices
Precondition	User is successfully logged in application.
Main Path	<ol style="list-style-type: none"> 1. User chooses "List all devices" 2. User chooses a criteria for filtering.
Expected Result	The list of devices is filtered

Test ID	6.0
Test Name	Perform an action
User Story ID	US7
Description	A user should be to see a list of all device details and items (for that device) that are editable
Precondition	User is successfully logged in application.
Main Path	<ol style="list-style-type: none"> 1. User chooses "List all devices" 2. User selects desired device 3. User changes values for editable items 4. User sends changed values by clicking on the <i>Send</i> button in the top right corner
Expected Result	Changed values are sent to the server and the view is refreshed with new values received from server in response.

Test ID	6.1
Test Name	No action to perform
User Story ID	US7
Description	A user should be to see a list of all device details with no editable items
Precondition	User is successfully logged in application. User selected desired device.
Main Path	<ol style="list-style-type: none"> 1. User chooses "List all devices" 2. User selects desired device

	3. User sees the device details
Expected Result	Device does not have any editable items so user can only see details and cannot perform any actions.

Test ID	7.0
Test Name	Create a rule
User Story ID	US8
Description	A user should be able to create a rule for a specific device
Precondition	User is successfully logged in application. At least one device is in system.
Main Path	<ol style="list-style-type: none"> 1. User chooses "Rule" section in navigation drawer 2. User clicks add button 3. User selects device to create rule 4. User defines a rule with given possibilities for different devices 5. User clicks create button
Expected Result	Server creates a rule, provides corresponding message and rule can be seen in list of rules.

Test ID	7.1
Test Name	Create a rule failed
User Story ID	US8
Description	User wants to create a rule, but it fails.
Precondition	User is successfully logged in application. At least one device is in system.
Main Path	<ol style="list-style-type: none"> 1. User chooses "Rule" section in navigation drawer 2. User clicks add button 3. User selects device to create rule 4. User defines a rule with given possibilities for different devices 5. User clicks create button
Expected Result	Server provides error message that the rule cannot be created. Rule is not created.