Use Cases

for

GDC-EDaSA-IDS

Version 1.0 approved

Prepared by Bernd Landgraf

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Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Date | Reason For Changes | Version |
| Bernd Landgraf | 2014-07-17 | Initial Version | 1.0 |
|  |  |  |  |

# Use-Case Overview Diagram



# User Management

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | UM-1 [TBD] | | |
| Use Case Name: | Register User | | |
| Created By: |  | Last Updated By: |  |
| Date Created: |  | Date Last Updated: |  |

|  |  |
| --- | --- |
| Actor: |  |
| Description: |  |
| Preconditions: |  |
| Postconditions: |  |
| Priority: |  |
| Frequency of Use: |  |
| Normal Course of Events: |  |
| Alternative Courses: |  |
| Exceptions: |  |
| Includes: |  |
| Special Requirements: |  |
| Assumptions: |  |
| Notes and Issues: |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | UM-2 [TBD] | | |
| Use Case Name: | Setup Client Device | | |
| Created By: |  | Last Updated By: |  |
| Date Created: |  | Date Last Updated: |  |

|  |  |
| --- | --- |
| Actor: |  |
| Description: |  |
| Preconditions: |  |
| Postconditions: |  |
| Priority: |  |
| Frequency of Use: |  |
| Normal Course of Events: |  |
| Alternative Courses: |  |
| Exceptions: |  |
| Includes: |  |
| Special Requirements: |  |
| Assumptions: |  |
| Notes and Issues: |  |

# Redirect Proxy

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | RP-1 [TBD] | | |
| Use Case Name: | Authenticate User | | |
| Created By: |  | Last Updated By: |  |
| Date Created: |  | Date Last Updated: |  |

|  |  |
| --- | --- |
| Actor: |  |
| Description: |  |
| Preconditions: |  |
| Postconditions: |  |
| Priority: |  |
| Frequency of Use: |  |
| Normal Course of Events: |  |
| Alternative Courses: |  |
| Exceptions: |  |
| Includes: |  |
| Special Requirements: |  |
| Assumptions: |  |
| Notes and Issues: |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | RP-2 | | |
| Use Case Name: | Redirect the client to the suffix-proxy | | |
| Created By: | Bernd Landgraf | Last Updated By: | Bernd Landgraf |
| Date Created: | 2014-07-22 | Date Last Updated: | 2014-07-22 |

|  |  |
| --- | --- |
| Actor: | Client |
| Description: | When the Redirect-Proxy receives a request from an authenticated client, it will redirect the client’s request to the suffix-proxy |
| Preconditions: | Client is authenticated |
| Postconditions: | The client receives a redirect to the suffix-proxy |
| Priority: | Critical |
| Frequency of Use: |  |
| Normal Course of Events: | 1. The client issues a request to the redirect-proxy 2. The redirect-proxy receives the request 3. The redirect-proxy sends a redirect to the client that points him to the suffix-proxy |
| Alternative Courses: | - |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | * **Security/Privacy:** All communication between the Client and the Redirect-Proxy has to be encrypted, either using SPDY or HTTP+TLS * **Performance:** The Redirect-Proxy should add as little latency as possible |
| Assumptions: |  |
| Notes and Issues: |  |

# Suffix-Proxy

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | SP-1 | | |
| Use Case Name: | Handle communication between client and foreign server | | |
| Created By: | Bernd Landgraf | Last Updated By: | Bernd Landgraf |
| Date Created: | 2014-07-22 | Date Last Updated: | 2014-07-22 |

|  |  |
| --- | --- |
| Actor: | Client, Foreign Server |
| Description: | When the Suffix-Proxy receives a request from the Client, it forwards the request to the foreign server, receives the foreign server’s response, analyzes the response for attack vectors and forwards the response to the Client. |
| Preconditions: | Client is authenticated |
| Postconditions: | The Client receives a response |
| Priority: | Critical |
| Frequency of Use: |  |
| Normal Course of Events: | 1. The Client sends a request to the Suffix-Proxy 2. The Suffix-Proxy forwards the request to the Foreign Server 3. The Foreign Server send a response back to the Suffix-Proxy 4. The Suffix-Proxy analyzes the response for attack vectors 5. IF the response is considered safe, the Suffix-Proxy performs URL-Rewriting 6. IF the response is considered safe, the Suffix-Proxy forwards the rewritten response to the client |
| Alternative Courses: | SP-1.AC.1 5 IF the response is considered unsafe, the Suffix-Proxy sends a warning to the client  SP-1.AC.1 6 The client decides if he still wants to retrieve the response  SP-1.AC.1.7 IF the client decides to receive the response, the Suffix-Proxy forwards the response to the client  SP-1.AC.2.5 IF the response is considered to be dangerous, the Suffix-Proxy sends an information to the client |
| Exceptions: |  |
| Includes: |  |
| Special Requirements: | * **Security/Privacy:** All communication between the Client and the Redirect-Proxy has to be encrypted, either using SPDY or HTTP+TLS   If possible, all communication between the Suffix-Proxy and the Foreign Server has to be encrypted   * **Usability**: False-Alarm-Rate ~ < 10-5 * **Performance**: [TBD] |
| Assumptions: |  |
| Notes and Issues: |  |

# Appendix: Guidance for Use Case Template

Document each use case using the template shown in the Appendix. This section provides a description of each section in the use case template.

# Use Case Identification

## Use Case ID

Give each use case a unique numeric identifier, in hierarchical form: X.Y. Related use cases can be grouped in the hierarchy. Functional requirements can be traced back to a labeled use case.

## Use Case Name

State a concise, results-oriented name for the use case. These reflect the tasks the user needs to be able to accomplish using the system. Include an action verb and a noun. Some examples:

1. View part number information.
2. Manually mark hypertext source and establish link to target.
3. Place an order for a CD with the updated software version.

## Use Case History

### Created By

Supply the name of the person who initially documented this use case.

### Date Created

Enter the date on which the use case was initially documented.

### Last Updated By

Supply the name of the person who performed the most recent update to the use case description.

### Date Last Updated

Enter the date on which the use case was most recently updated.

# Use Case Definition

## Actor

An actor is a person or other entity external to the software system being specified who interacts with the system and performs use cases to accomplish tasks. Different actors often correspond to different user classes, or roles, identified from the customer community that will use the product. Name the actor(s) that will be performing this use case.

## Description

Provide a brief description of the reason for and outcome of this use case, or a high-level description of the sequence of actions and the outcome of executing the use case.

## Preconditions

List any activities that must take place, or any conditions that must be true, before the use case can be started. Number each precondition. Examples:

1. User’s identity has been authenticated.
2. User’s computer has sufficient free memory available to launch task.

## Postconditions

Describe the state of the system at the conclusion of the use case execution. Number each postcondition. Examples:

1. Document contains only valid SGML tags.
2. Price of item in database has been updated with new value.

## Priority

Indicate the relative priority of implementing the functionality required to allow this use case to be executed. The priority scheme used must be the same as that used in the software requirements specification.

## Frequency of Use

Estimate the number of times this use case will be performed by the actors per some appropriate unit of time.

## Normal Course of Events

Provide a detailed description of the user actions and system responses that will take place during execution of the use case under normal, expected conditions. This dialog sequence will ultimately lead to accomplishing the goal stated in the use case name and description. This description may be written as an answer to the hypothetical question, “How do I <accomplish the task stated in the use case name>?” This is best done as a numbered list of actions performed by the actor, alternating with responses provided by the system.

## Alternative Courses

Document other, legitimate usage scenarios that can take place within this use case separately in this section. State the alternative course, and describe any differences in the sequence of steps that take place. Number each alternative course using the Use Case ID as a prefix, followed by “AC” to indicate “Alternative Course”. Example: X.Y.AC.1.

## Exceptions

Describe any anticipated error conditions that could occur during execution of the use case, and define how the system is to respond to those conditions. Also, describe how the system is to respond if the use case execution fails for some unanticipated reason. Number each exception using the Use Case ID as a prefix, followed by “EX” to indicate “Exception”. Example: X.Y.EX.1.

## Includes

List any other use cases that are included (“called”) by this use case. Common functionality that appears in multiple use cases can be split out into a separate use case that is included by the ones that need that common functionality.

## Special Requirements

Identify any additional requirements, such as nonfunctional requirements, for the use case that may need to be addressed during design or implementation. These may include performance requirements or other quality attributes.

## Assumptions

List any assumptions that were made in the analysis that led to accepting this use case into the product description and writing the use case description.

## Notes and Issues

List any additional comments about this use case or any remaining open issues or TBDs (To Be Determineds) that must be resolved. Identify who will resolve each issue, the due date, and what the resolution ultimately is.