Design document

ePostBox v2

- Ministry of Finance
- 1.0.0
- 22.2.2019

Release history

Date	Version	Description	Author/Approved
18.02.2019	0.9.4	English version.	BÞS/BLH
12.02.2020	1.0.0	Updated from SOAP to REST interface.	BÞS

Table of Contents

1 INTRODUCTION

This document describes the design of the backend system for island.is and how the interaction between the backend and the document source (document provider) is arranged. Here it is not described how data is displayed on island.is.

Communication between island.is and the document provider will be through Web services (Rest). This communication will be in both directions. Document providers will need to send island.is reference for new documents that are available for publication on island.is. References (also referred as index or documentindex) link individuals, public entities, and certain documents. The documents themselves are still stored by the documents provider they originate from. Users can then identify themselves on island.is and see a list of documents which belong to them. If the user wants to see the document itself, then the system retrieves the document from the document provider. In other words, the document is only retrieved on user request.

Document providers will therefore need to implement their services, which the system has access to. The web service needs to be created according to pre-defined interface. Thus, the system will be able to make a homogeneous query on any document provider where the endpoint is just different for each document provider.

2 SYSTEM PARTS

2.1 OVERVIEW

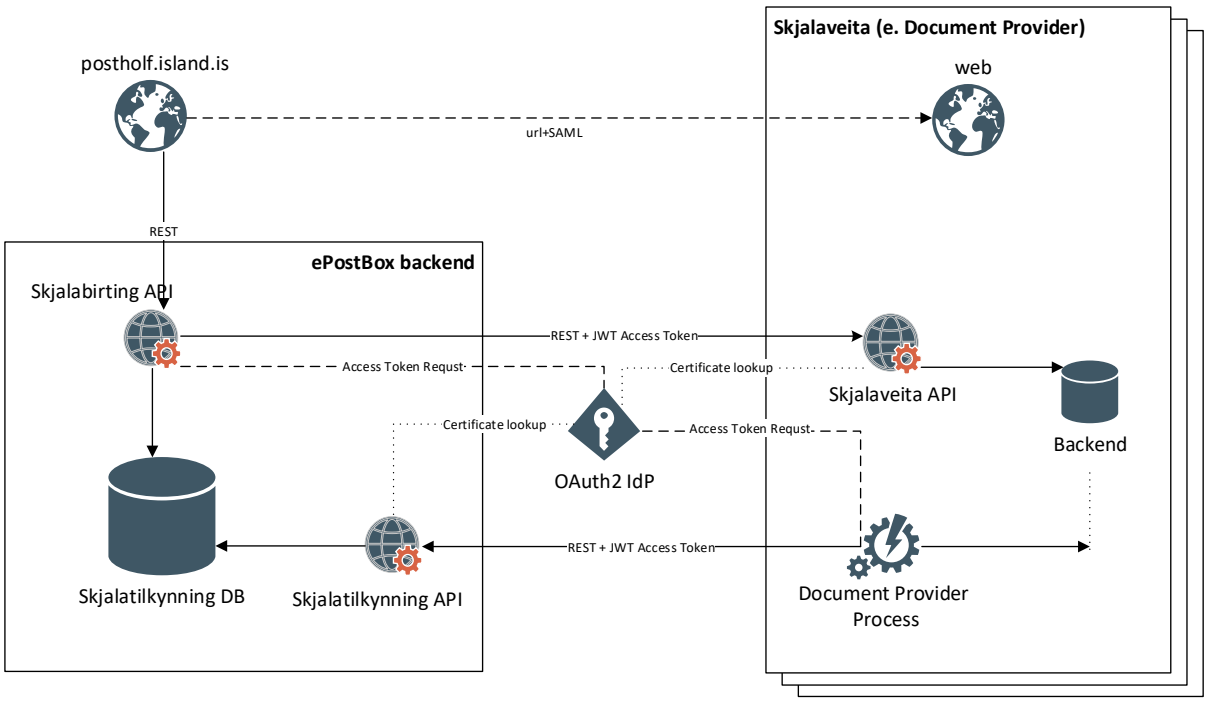

IMAGE 1 SHOWS THE MAIN COMPONENT OF THE SYSTEM

2.2 SKJALATILKYNNING API

Web services that document providers use to submit and maintain document references.

Clients (Document Providers) authenticate themselves with OAuth 2.0 Authentication using Client Credentials Grant (https://tools.ietf.org/html/rfc6749#section-4.4)

All operation that maintain references can take array of 1-200 changes at time. They return array result for each change in the same order they entered.

2.2.1 CATEGORIES

Returns possible categories of documents in Icelandic. Examples of categories: Heilsa (e. Health), Skattamál (e. Taxation), Fjármál (e. Financial), ...

Request:

GET /api/v1/documentindexes/categories

Response:

```
[
  "string"
]
```

Variable	Type	Description
[]	String	Document categories that can be used when document reference is registered.

2.2.2 TYPES

Returns potential types of documents. Example types: Launaseðill (e. Paycheck), Greiðsluseðill (e. Invoice), Yfirlit (e. Overview/Summary),..

Request:

GET /api/v1/documentindexes/types

Response:

```
[
  "string"
]
```

Variable	Type	Description
[]	String	Document type that can be used when registering document reference.

2.2.3 DOCUMENTINDEX

A document provider submits(registers) reference to documents. A reference consists of the name of the document, its identifier, owner kennitala (e. icelandic person/corp identity), along with other information. An organization may submit more than one reference that are referring to the same document, e.g. when a couple should see the same document. After the operation, the document becomes visible to the user of the web site(island.is).

Request:

POST /api/v1/documentindexes

Body:

```
[
  {
    "kennitala": "string",
    "documentId": "string",
    "senderKennitala": "string",
    "senderName": "string",
    "authorKennitala": "string",
    "caseId": "string",
    "category": "string",
    "type": "string",
    "subType": "string",
    "subject": "string",
    "documentDate": "datetime",
    "publicationDate": "datetime",
    "notifyOwner": “boolean,
    "minimumAuthenticationType": "string"
  }
]
```

Array of document references. It‘s possible to submit 1-200 references at a time

Variable	Optional	Type	Description
kennitala	N	String(10)	Kennitala of the document owner/recipient, that is the one who should see the document.
documentId	N	String	A unique identifier within a document provider. Used to retrieve a document, when user requests it.
senderKennitala	N	String(10)	Sender kennitala (usually some institution). (A document provider can represent and register documents for many senders)

senderName	N	String	Name of the sender.
authorKennitala	N	String(10)	Author kennitala (Usually same as the Sender (KennitalaSendanda))
caseId	Y	String	Case number within the institution (sender).
category	N	String(25)	Document category. Only allowed predefined document categories. The operation SaekjaFlokka (e. GetCategories) returns the types that are available.
type	N	String(25)	Document type. Only allowed predefined document types. The operation SaekjaTegundir (e. GetTypes) returns the types that are available.
subType	Y	String	Sub-type, selected by a document provider.
subject	N	String(80)	Document name or description, free text up to 80 characters.
documentDate	N	Datetime	Date of document (not publication date).
publicationDate	Y	Datetime	Indicates when the document should appear to the user. For example, if the publisher wants to submit a reference tor a document to be published at the next month. If nothing is set, the document is displayed immediately. Date Display may not exceed 60 days in advance.
notifyOwner	Y	Boolean	Optional parameter to request the recipient to be notified that he has a new unread document. STRAX = Notify the recipient immediately about the document. NAEST = Notify the user at the next regular notification (usually within 72 hours) (Notification is skipped if the recipient has already viewed the document) EKKI = Do not notify, an example might be a pay slip.

minimumAuthenticationType	Y	String	Minimum authentication type/strength to open/view the document. The default is LOW. LOW = User/pass SUBSTANTIAL = Two factor authentication (User/Pass and additionally an SMS) HIGH = Client Certificate

Response:

```
[
  {
    "kennitala": "string",
    "documentId": "string",
    "success": true,
    "errors": [
      "string"
    ]
  }
]
```

Property	Type	Description
kennitala	String	Kennitala of the document owner/recipient.
documentId	String	A unique identifier for the reference within the document provider
success	Boolean	Successful
errors[]	String	Error messages (only if success=false).

2.2.4 WITHDRAWN

Opereration to withdraw document that is no longer available for publication. For example if an error was in the document and the document provider therefore wants to disable the document. The reference to the document will not be removed from the user's list, but will be marked withdrawn. The user sees that it is no longer for display.

Request:

POST /api/v1/documentindexes/withdraw

Body

```
[
  {
    "kennitala": "string",
    "documentId": "string",
    "reason": "string"
  }
]
```

Array of withdrawn references. It‘s possible to withdraw 1-200 references at a time

Variable	Type	Description
kennitala	String(10)	Owner/recipient kennitala.
documentId	String	A unique identifier which was used when the document was registered (for the reference within the document provider).
reason	String	Reason for withdrawal.

Response:

```
[
  {
    "kennitala": "string",
    "documentId": "string",
    "success": true,
    "errors": [
      "string"
    ]
  }
]
```

Property	Type	Description
kennitala	String	Kennitala of the document owner/recipient.
documentId	String	A unique identifier for the reference within the document provider
success	Boolean	Successful
errors[]	String	Error messages (only if success=false).

2.2.1 READ

If a document provider has published a document in a location other than island.is, the document can be marked as read. Thus, the user can see that he has opened the document regardless of where he opened it.

Request:

POST /api/v1/documentindexes/withdraw

Body

```
[
  {
    "kennitala": "string",
    "documentId": "string"
  }
]
```

It‘s possible to mark 1-200 references as read at a time

Variable	Type	Description
kennitala	String(10)	Owner/recipient kennitala.
documentId	String	A unique identifier which was used when the document was registered (for the reference within the document provider).

Response:

```
[
  {
    "kennitala": "string",
    "documentId": "string",
    "success": true,
    "errors": [
      "string"
    ]
  }
]
```

Property	Type	Description
kennitala	String	Kennitala of the document owner/recipient.
documentId	String	A unique identifier for the reference within the document provider
success	Boolean	Successful

errors[]	String	Error messages (only if success=false).

2.3 Skjalaveita API

Service that document providers need to implement. All of the document providers need to implement the same interface. The backend system in island.is will call this service to retrieve document from document provider when a user wants to view the document.

Https communication is required. The backend system will identify itself with JWT in the Authorization header using the Bearer schema. The service MUST validate the signature, issuer, expirery dates, audience and OPTIONALLY scope.

2.3.1 Document (RetreiveDocument)

The operation returns a owner's document. The service should only return a document if the identifier (SkjalId) and owner kennitala matches in the document provider systems.

Request pattern:

GET $BASE_URL$/{kennitala}/documents/{documentId}?authenticationType={authenticationType}

Variable	Type	Description
kennitala	String	Owners/recipients kennitala.
documentId	String	A unique identifier for the reference within the document provider.
authenticationType	String	Strength of authentication of the user/recipient of the document. LOW = User/pass SUBSTANTIAL = Two factor authentication (User/Pass and additionally SMS) HIGH = Client Certificate

Response:

```
{
  "type": "string",
  "content": "string"
}
```

Property name	Type	Description

type	String	Document form (file ending). For example, pdf, xls, etc. If nothing is given, pdf is the default and recommended if there is not a special reason for something else.
content	Base64Binary (String)	The document/file content base64 encoded.
Or		
type	String	If set to “url”, island.is will redirect the user to a document delivery site. User is transferred between along with a signed SAML2 xml.
content	String	Url
Or		
type		If set to “html”, page with the html content will be displayed in new tab.
content	String	Html to display the user. The HTML must contain all "inline" to display. HTML must not contain javascript.

3 SEQUENCE DIAGRAM

3.1 GET DOCUMENT

Sequence diagram that describes how island.is retrieves a document and displays the user. This is valid when documents that are in the form of a non-external connection are required, such as pdf.

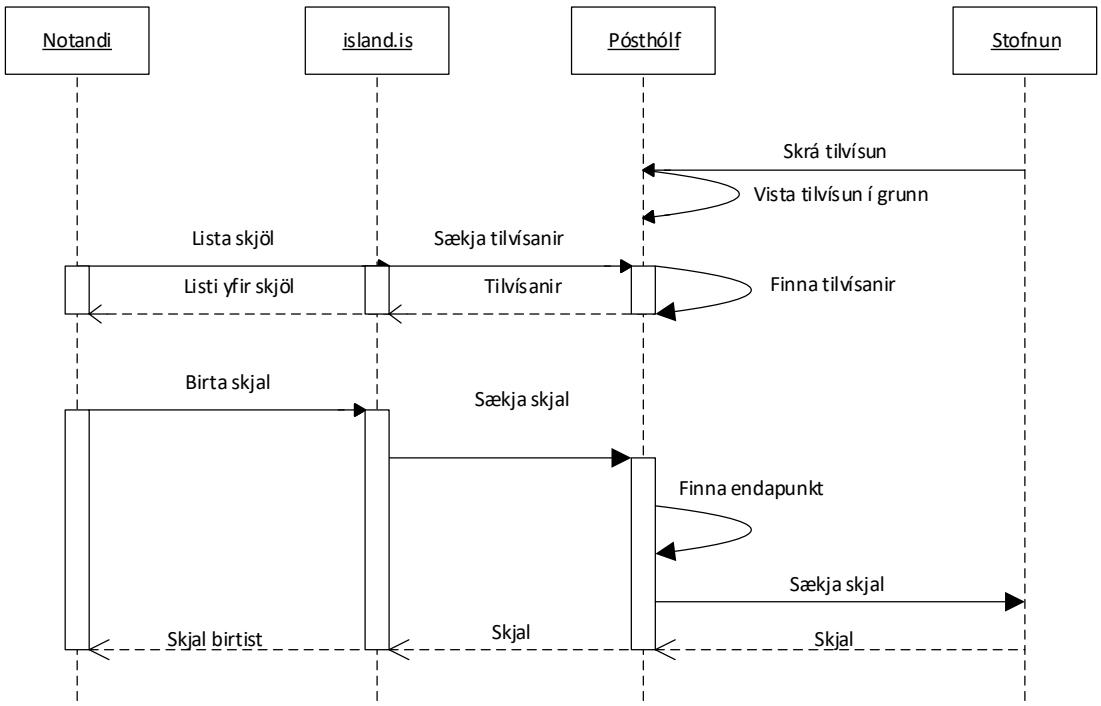

IMAGE 2 SEQUENCE DIAGRAM FOR GET DOCUMENT

4 INTERFACES

4.1 SKJALATILKYNNING API SWAGGER

Test http://test-skjalatilkynning-island-is.azurewebsites.net/swagger/ui/index

Production: https://skjalatilkynning-island-is.azurewebsites.net/swagger/ui/index

4.2 SKJALAVEITAAPI SWAGGER


```
{
  "openapi": "3.0.1",
  "info": {
    "title": "Skjalaveita API",
```

```
  "version": "v1"
},
"paths": {
 "/api/v1/customer/{kennitala}/documents/{documentId}": {
  "get": {
   "tags": [
    "Documents"
   ],
   "parameters": [
    {
     "name": "kennitala",
     "in": "path",
     "required": true,
     "schema": {
      "type": "string"
     }
    },
    {
     "name": "documentId",
     "in": "path",
     "required": true,
     "schema": {
      "type": "string"
     }
    },
    {
     "name": "authenticationType",
     "in": "query",
     "schema": {
      "type": "string"
     }
    }
   ],
   "responses": {
    "200": {
     "description": "Success",
     "content": {
      "text/plain": {
       "schema": {
        "$ref": "#/components/schemas/Document"
       }
      },
      "application/json": {
       "schema": {
        "$ref": "#/components/schemas/Document"
       }
      },
      "text/json": {
```

```
            "schema": {
              "$ref": "#/components/schemas/Document"
            }
          }
        }
      },
      "400": {
        "description": "Bad Request",
        "content": {
          "text/plain": {
            "schema": {
              "$ref": "#/components/schemas/Error"
            }
          },
          "application/json": {
            "schema": {
              "$ref": "#/components/schemas/Error"
            }
          },
          "text/json": {
            "schema": {
              "$ref": "#/components/schemas/Error"
            }
          }
        }
      },
      "401": {
        "description": "Unauthorized"
      }
    }
  }
},
"components": {
  "schemas": {
    "Document": {
      "type": "object",
      "properties": {
        "type": {
          "type": "string",
          "nullable": true
        },
        "content": {
          "type": "string",
          "nullable": true
        }
      },
      "additionalProperties": false
```

```
    },
    "Error": {
      "type": "object",
      "properties": {
        "errorMessage": {
          "type": "string",
          "nullable": true
        }
      },
      "additionalProperties": false
    }
  }
 }
}
```


Also available here:

https://test-skjalaveita-island-is.azurewebsites.net/swagger/v1/swagger.json