Developer Note: Implementing API Requests in RcertVault

Step 1: Token Authentication

- Use **TokenAuth (apiKey)** for authentication.
- Prefix: `"Token "`
- Name: `Authorization`
- In: `header`

Step 2: API Documentation

- You can access the default API documentation here: http://202.51.70.18/redoc/
- Test api from : http://202.51.70.18/doc/

Step 3: Signing

❖ Signing Challenge Request

- Make a request to:
- `http://202.51.70.18/api/v1/signing-challenge/`
- Include the parameters as described in the documentation.
- **Optional Parameter:** `force_create`
    - If set to `true`, this will delete any existing session and create a **new signing session** for additional PDFs.

❖ Handling the Response

- If the user has **auto-signing enabled**, you will receive:

```
{
  "signing_session_id": "8b88a1ad-5778-40fc-b216-14296ea2b907",
  "max_pdfs": 10,
  "expires_in_sec": 50884,
  "message": "Existing active signing session returned"
}
```

- If **auto-signing is not enabled**, you will receive:

```
{
  "challenge_id": "57e48e56-efce-42d6-adc8-ead7860c2530",
  "challenge_text":
  "eJwNyzkOgCAQAMAvLSCuFJSG2JAoWhuEtcQD6Hi89jNuMnayZhnnbXRrq5lezVu6UiA
  doxQAwAT3p/JEILFHVAf4jtSAR3vpqZQLxf2O5x6umopm0ErW7Jf/VCg+/Q4e9Q==",
  "expires_in_sec": 300
}
```

❖ Verify Challenge (If Auto-Signing is Disabled)

- Send the **`challenge_text`** to **DsignerClient** or **EMSigner** as a **form sign**.

- Use the response from DsignerClient/EMSigner in the verify challenge API:
- `http://202.51.70.18/api/v1/verify-challenge`
- Request payload example:
- `{`
- `  "force_create": true,`
- `  "challenge_id": "3fa85f64-5717-4562-b3fc-2c963f66afa6",`
- `  "signature": "string"`
- `}`
    - `force_create`: If `true`, creates a new signing session and deletes any existing session.
    - `signature`: The signature obtained from DsignerClient or EMSigner.
- Once verified, the API will return a **`signing_session_id`**, which you can then use to sign PDFs.

❖ Signing PDFs

- If you have a **`signing_session_id`**, use the bulk signing API:
- `http://202.51.70.18/api/v1/bulk-sign`
- Include the `signing_session_id` and PDFs you want to sign.

Note:- Session is only valid for 24 hours

Step 4: Verification

❖ Form Verification

- Make a request to:
- `http://202.51.70.18/api/v1/verify/` `verify_text/`
- Include the parameters as described in the documentation.
    - **Response:-**

.


```
{
  "status": "success",
  "message": [
    [
      {
        "cert_name": "Test1",
        "signature_ok": true,
        "hash_ok": true,
        "cert_ok": true
      }
    ],
    true
  ]
}
```

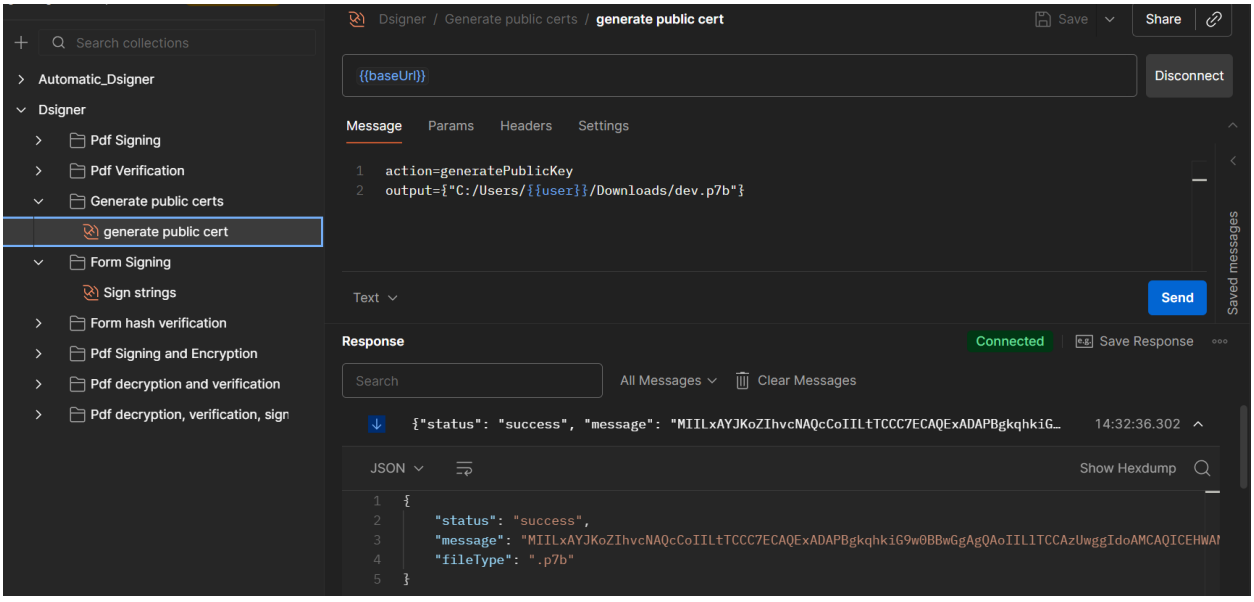
- Here, The final boolean value (true or false) in the response indicates the overall verification status. If it is true, it means that **all checks have passed successfully** — the certificate is valid, the hash matches, and the signature is correct. If it is false, it means one or more of these checks have failed.

❖ Pdf Verification

- Make a request to:
- http://202.51.70.18/api/v1/verify/ verify_text/
- Include the parameters as described in the documentation.
- Response is exactly same as the form verification.

Step 5: Creation of the .p7b File for Upload to the Signing Portal

- Use the WebSocket API shown in the image below to generate the .p7b file. The system allows the user to provide a save location as input, which is then used as the output path to store the generated .p7b file on the user's local machine, enabling easy upload to **RcertVault**.
- Alternatively, decode the response message, persist it as a .p7b file, and provide it to the user for download and subsequent upload to **RcertVault**.



Extra Informations:-

```
1) signature_ok:

        a) Indicates whether the cryptographic digital signature applied to the PDF document is valid.
        b) it involves verifying the digital signature using the public key associated with the signing certificate.
               This process ensures that the signature was created with the corresponding private key and has not been altered.
        c) If signature_ok is True for a specific signature in a PDF,
               it means that the signature on that portion of the document has been successfully verified.

2) hash_ok:

        a) Indicates whether the hash of the document content matches the hash value embedded in the digital signature.
        b) PDF signatures involve creating a hash (digest) of the document content and then encrypting this hash with the signer's private key.
               The hash_ok check verifies that the decrypted hash matches the independently computed hash of the document content.
        c) If hash_ok is True, it means that the content of the signed section in the PDF has not been altered since it was signed.

3) cert_ok:

        a) Indicates whether the digital certificate used for the signature is valid and trusted in the PDF context.
        b) PDF digital signatures are often associated with digital certificates.
               The cert_ok check involves verifying the validity of the digital certificate,
               including checking the certificate's signature, expiration date,
               and whether it is issued by a trusted certificate authority (CA).
        c) If cert_ok is True, it means that the certificate associated with the signature is valid, issued by a trusted CA, and not expired.
```