

Sign interface

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Introduction

Below will be detailed the SOAP request for sign, change password ecc...

All the methods described are on interface:

```
https://<IP-APPLIANCE>:8080/SignEngineWeb/sign-services?wsdl
```

The SOAP request examples are generated using SoapUI, you can use this [guide](#) to configure SoapUI on your pc.

In this guide will be described the example of Soap Requests.

Credentials Object

All methods for sign require the object Credentials is used to specify the device signature are you using for sign. This object is composed by this variables:

SOAP-credentials-object

```
<credentials>
    <username>?</username>
    <password>?</password>
    <idOtp>?</idOtp>
    <otp>?</otp>
    <securityCode>?</securityCode>
    <sessionKey>?</sessionKey>
</credentials>
```

According the device signature (automatic or remote) are you using you should populate different fields.

Automatic Signature

Below the example of Credentials :

SOAP-Credentials-object-automatic-signature

```
<credentials>
    <username>AH1123456</username>
    <password>13572468</password>
</credentials>
```

Fields required:

- username
- password

Remote Signature

If you sign with the remote there are two ways:

- specify "idOtp" and "otp"
- specify the sessionKey

Example with "idOtp" and "otp":

SOAP-Credentials-object-remote-signature-idotp-otp

```
<credentials>
    <username>RHIP1234567</username>
    <password>13572468</password>
    <idOtp>501719</idOtp>
    <otp>150259</otp>
</credentials>
```

Example with "sessionKey"

SOAP-Credentials-object-remote-signature-sessionKey

```
<credentials>
    <username>RHIP1234567</username>
    <password>13572468</password>
    <sessionKey>sadlijhdfkjslheroufdblkhesljherihbfdoihejheroihger</sessionKey>
</credentials>
```

If you decide to sign with idOtp and OTP you must obtain the OTP code for sign (from SMS, App and Token) and idOtp.

How obtain the idOtp and OTP code

Below will described with SOAP request how obtain idOtp (with method getOtpList) and OTP code.

Obtain the idOtp

You can obtain the idOtp with method getOtpList. Below the example of SoapRequest. In this example we are using the devicename: "RHIP20102336019765":

REQUEST-getOTPList

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ser="http://service.ws.name">
    <soapenv:Header/>
    <soapenv:Body>
        <ser:getOTPList>
            <credentials>
                <username>RHIP12345</username>
            </credentials>
        </ser:getOTPList>
    </soapenv:Body>
</soapenv:Envelope>
```

In output the SOAP response will be:

RESPONSE-getOTPList

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
    <soap:Body>
        <ns2:getOTPListResponse xmlns:ns2="http://service.ws.name">
            <return>
                <idOtp>501719</idOtp>
                <serialNumber>20210113-091031RJ2L1</serialNumber>
                <type>SMS</type>
            </return>
            <return>
                <idOtp>537430</idOtp>
                <serialNumber>20210305-163726L0PYF</serialNumber>
                <type>OTP GENERATOR</type>
            </return>
            <return>
                <idOtp>537433</idOtp>
                <serialNumber>20210305-163726F0I75</serialNumber>
                <type>OTP PUSH</type>
            </return>
        </ns2:getOTPListResponse>
    </soap:Body>
</soap:Envelope>
```

During the signing process, it is possible to choose between these two idOtps: 501719 (associated with OTP SMS) and the idOTP: 537430 (associated with OTP GENERATOR).

It is not possible to use OTP PUSH, they are used for other purposes, not for signing.

For the signature we can choose two types of idOTP: 501719 or 537430.

Obtain the OTP code

With OTP SMS we can obtain the code using the method "sendOtpBySMS" like in this SOAP request:

REQUEST-sendOTPBySMS

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ser="http://service.ws.name">
    <soapenv:Header/>
    <soapenv:Body>
        <ser:sendOtpBySMS>
            <credentials>
                <username>RHIP12345</username>
            </credentials>
        </ser:sendOtpBySMS>
    </soapenv:Body>
</soapenv:Envelope>
```

If everything is ok, in output response will be:

RESPONSE-sendOTPBySMS

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
    <soap:Body>
        <ns2:sendOtpBySMSResponse xmlns:ns2="http://service.ws.name"/>
    </soap:Body>
</soap:Envelope>
```

On your mobile phone, you will receive an SMS containing the OTP code (composed of 6 numbers) for signature. Now, for example, we have received the code: "214196".

While with OTP App and Token you don't require the method of SWS because you can read the OTP code on Token display or on your smartphone display (if you are using the App).

Manage the sessionKey

Below will be describe the SOAP request example for obtain the sessionKey, check if the sessionKey is valid and destroy the sessionKey

[Obtain the sessionKey](#)

Below the SOAP request example for create the openSession:

REQUEST-openSession

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ser="http://service.ws.nam/">
<soapenv:Header/>
<soapenv:Body>
<ser:openSession>
<credentials>
<idOtp>501719</idOtp>
<otp>150259</otp>
<password>13572468</password>
<username>RHIP12345</username>
</credentials>
</ser:openSession>
</soapenv:Body>
</soapenv:Envelope>
```

In output will obtain the value of sessionKey which will be used for the signature:

RESPONSE-REMOTE-openSession

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
<soap:Body>
<ns2:openSessionResponse xmlns:ns2="http://service.ws.nam/">
<return>
f41f7bq/cCxW6mTgL3iGjFEST5cEAZjqLnXvV3hUFzFHcTvjlH3FOkJy+kv/0Zsvl
uNK0S7L6jmQHYSSpBz+Cz17h3r5IEP2FqrK7WJQTVyrNfyrr/trZmDgxYOLuACyoZUFIlnck5Lkjihui
sv+gZeB68Spwm+cNDdQQdUS3ngzJavHXxo9ADCX6VDIKKMe
/AY0v+R51XWE90JF5LfKEThlv1OCpQC5nhnW8WKOFOm
P4vM90d79JhFYGVVSZWtnTQ9Dg8pOMvg9wwxNm3uGkKKaS7oTp1ewd+eCG/uSC9k3H2w9GB6vQLHQEbnn6d
VVMcsIqJ0RMmZ2IgraD+scb4Q==

</return>
</ns2:openSessionResponse>
</soap:Body>
</soap:Envelope>
```

The sessionKey just obtained is valid for three minutes (it is not possible to edit this value!). After it expires, you will need to generate another sessionKey using openSession method and new OTP code (it is not possible to use the same OTP already in use).

Check the sessionKey status

Below the SOAP request example for check the sessionKey status:

REQUEST-remote-getRemainingTimeForSession

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ser="http://service.ws.nam/">
    <soapenv:Header/>
    <soapenv:Body>
        <ser:getRemainingTimeForSession>
            <credentials>
                <username>RHIP12345</username>
                <sessionKey>
                    f41f7bq/cCxW6mTgL3iGjFEST5cEAZjgLnXvV3hUFzFHcTvjlH3FOkJy+kv
                    /0Zsv1
                    uNK0S7L6jMqHYSSpBz+CZl7h3r5IEP2FqrK7WJQTVyrNfy
                    r
                    /trZmDgxYOLuACyoZVUFIlnck5Lkjihui
                    sv+gZeB68Spwm+cNDdQQdUS3ngzJavHXxo9ADCX6VDIKKMe
                    /AY0v+R51XWE90JF5LfKETh1v1OCpQC5nhnW8WKOFOm
                    P4vM90d79JhFYGVVSZWtnTQ9Dg8pOMvg9wwxNm3uGkKKaS7oTplewd+eCG
                    /uSC9k3H2w9GB6vQLHQEbnd
                    VVMcsIqJ0RMmZ2IgraD+scb4Q==

                </sessionKey>
            </credentials>
        </ser:getRemainingTimeForSession>
    </soapenv:Body>
</soapenv:Envelope>
```

The SOAP response will be:

RESPONSE-remote-getRemainingTimeForSession

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
    <soap:Body>
        <ns2:getRemainingTimeForSessionResponse xmlns:ns2="http://service.ws.nam/">
            <return>167</return>
        </ns2:getRemainingTimeForSessionResponse>
    </soap:Body>
</soap:Envelope>
```

Where 167 is the seconds until the session is active. After 180 seconds from creation, the session will be automatically deleted, but for good practice, close the session before it expires.

You can destroy the session manually before it expires with the method **closeSession**.

Destroy the sessionKey

Below the example of SOAP request for destroy the session:

REQUEST-remote-closeSession

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ser="http://service.ws.name/">
    <soapenv:Header/>
    <soapenv:Body>
        <ser:closeSession>
            <credentials>
                <username>RHIP12345</username>
                <sessionKey>f41f7bq/cCxW6mTgL3iGjFEST5cEAZjgLnXvV3hUFzFHcTvjlH3FOkJy+kv
                /0ZsvluNK0S7L6jmQHYSpBz+CZl7h3r5IEP2FqrK7WJQTVyrNfy
                /trZmDgxYOLuACyoZVUF1lnck5Lkjihuisv+gZeB68Spwm+cNDdQqdUS3ngzJavHXxo9ADCX6VDIKKMe
                /AY0v+R51XWE90JF5LfKEThlv1OCpQC5nhnW8WKOFOM P4vM90d79JhFYGVVSZWtnTQ9Dg8p0Mvg9wwxNm3uGkKKaS7oTp1ewd+eCG
                /uSC9k3H2w9GB6vQLHQEbnn6dVVMcslqJ0RMmZ2IgraD+scb4Q==</sessionKey>
            </credentials>
        </ser:closeSession>
    </soapenv:Body>
</soapenv:Envelope>
```

The SOAP response will be ever like this:

RESPONSE-remote-closeSession

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
    <soap:Body>
        <ns2:closeSessionResponse xmlns:ns2="http://service.ws.name/" />
    </soap:Body>
</soap:Envelope>
```

Summarize

The credentials object for automatic signature is composed like in this example:

REQUEST-AUTOMATIC-Credentials

```
<credentials>
    <username>AHIP12345</username>
    <password>1357268</password>
</credentials>
```

With remote signature if you don't use the sessionKey the object Credentials will be:

REQUEST-Credentials-Remote-OTP-SMS

```
<credentials>
    <password>13572468</password>
    <username>RHIP12345</username>
    <idOtp>501719</idOtp>
    <otp>150259</otp>
</credentials>
```

While if you are using the sessionKey the object Credentials will be:

REQUEST-Credentials-Remote-OTP-SMS

```
<credentials>
    <password>13572468</password>
    <username>RHIP12345</username>
<sessionKey>f41f7bq/cCxW6mTgL3iGjFEST5cEAZjgLnXvV3hUFzFHcTvjlH3FOkJy+kv
/0Zsv1uNK0S7L6jmqHYSSpBz+CZ17h3r5IEP2FqrK7WJQTVyrNfy
/trZmDgxYOLuACyoZVUFlnc5Lkjihuisv+gZeB68Spwm+cNDdQDdUS3ngzJavHXxo9ADCX6VDIKKMe
/AY0v+r51XWE90JF5LfKETh1v1OcpQC5nhnW8WKOFOm P4vM90d79JhFYGVVSZWtnTQ9Dg8pOMvg9wwxNm3uGkKKaS7oTp1ewd+eCG
/uSC9k3H2w9GB6vQLHQEbnn6dVVMcsIqJ0RMmZ2IgraD+scb4Q==
    </sessionKey>
</credentials>
```

Methods for sign

Below will be described the SOAP request example for every type of signature:

- Pades
- Cades
- Xades

SignPades

The SOAP request for create Pades signature:

signPades

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ser="http://service.ws.name">
    <soapenv:Header/>
    <soapenv:Body>
        <ser:signPAdES>
            <credentials>
                <password>YOUR-DEVICE-PASSWORD</password>
                <username>YOUR-DEVICE-NAME</username>
            </credentials>
            <buffer>BASE64-TO-SIGN</buffer>
            <PAdESPReferences>
                <level>B</level>
                <signerImage>
                    <imageVisible>true</imageVisible>
                    <image>BASE64-IMAGE-LOGO</image>
                    <x>30</x>
                    <y>30</y>
                    <width>50</width>
                    <height>50</height>
                    <signerName>Name of Signer</signerName>
                </signerImage>
            </PAdESPReferences>
        </ser:signPAdES>
    </soapenv:Body>
</soapenv:Envelope>
```

At this [link](#) is possible to see the full example (with file to sign and logo image) of signature Pades with appearance.

While at this [link](#) , you can find an example of Level T (signature+timestamp)

SignPadesMultiFieldName

The SOAP request for create Pades signature using signatures field:

signPadesMultiFieldName

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ser="http://service.ws.name">
    <soapenv:Header/>
    <soapenv:Body>
        <ser:signPAdES>
            <credentials>
                <password>YOUR-DEVICE-PASSWORD</password>
                <username>YOUR-DEVICE-NAME</username>
                <sessionKey>SESSION_KEY_RECEIVED_FROM_OPEN_SESSION</sessionKey>
            </credentials>
            <buffer>BASE64-TO-SIGN</buffer>
            <PAdESPReferences>
                <level>B</level>
                <signerImage>
                    <fieldsNameList>SignatureField-1</fieldsNameList>
                    <fieldsNameList>SignatureField-2</fieldsNameList>
                    <!-- THIS OPTION set to true allow to sign all signatures fields available -->
                    <!-- <signAllFields>false</signAllFields> -->
                    <signerName>NAME OF SIGNER</signerName>
                </signerImage>
                <withSignatureField>true</withSignatureField>
            </PAdESPReferences>
        </ser:signPAdES>
    </soapenv:Body>
</soapenv:Envelope>
```

At this [link](#) is possible to see the full example (with file to sign and logo image) of signature Pades with appearance.

NOTE: in this example the signatures fields: "SignatureField-1" and "SignatureField-2" already exist in a PDF

The response will be the complex object: "PadesWithMultiFieldName" or generate a WSException if don't sign at least one signature field.

Below the response ok, when all elements of "fieldsNameList" are signed (the file is fully signed):

SOAP-response-signPadesMultiFieldName-output-fully-signed

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
    <soap:Body>
        <ns2:signPAdESMultiFieldNameResponse xmlns:ns2="http://service.ws.name">
            <return>
                <signedContent>BASE-64-OF-PDF-WITH-ELEMENTS-OF-LIST-FIELDNAMELIST</signedContent>
            </return>
        </ns2:signPAdESMultiFieldNameResponse>
    </soap:Body>
</soap:Envelope>
```

While if the field are signed partially (for example the session key has expired) therefore the file is partially signed, the response will be:

SOAP-response-signPadesMultiFieldName-output-partially-signed

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <ns2:signPAdESMultiFieldNameResponse xmlns:ns2="http://service.ws.nam/">
      <return>
        <signedContent>BASE-64-OF-PDF-WITH-ELEMENTS-OF-LIST-FIELDNAMELIST</signedContent>
        <serviceError>
          <code>69</code>
          <message>Session key scaduta</message>
        </serviceError>
        <remainingFieldNames>SignatureField-2</remainingFieldNames>
      </return>
    </ns2:signPAdESMultiFieldNameResponse>
  </soap:Body>
</soap:Envelope>
```

The tag:

- "signedContent" contains the [partially signed](#) file, because not all fields in a list have been signed
- "serviceError" contains the details about the cause because all signatures fields have been signed
- "remainingFieldNames" contains the list of field remaining to sign

In this case, the response will be the input of the new "signPadesMultiFieldName" request

While if you insert credentials.password, credentials.sessionKey, signature field not exist. In output will obtain a WSException like this:

SOAP-response-signPadesMultiFieldName-output-partially-signed

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <soap:Fault>
      <faultcode>soap:Server</faultcode>
      <faultstring>Richiesta non valida</faultstring>
      <detail>
        <ns2:WSException xmlns:ns2="http://service.ws.nam/">
          <error>105</error>
          <message>Richiesta non valida</message>
        </ns2:WSException>
      </detail>
    </soap:Fault>
  </soap:Body>
</soap:Envelope>
```

SignCades

The SOAP request for create Cades signature:

signCades

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ser="http://service.ws.name">
    <soapenv:Header/>
    <soapenv:Body>
        <ser:signCAdES>
            <credentials>
                <password>YOUR-DEVICE-PASSWORD</password>
                <username>YOUR-DEVICE-NAME</username>
            </credentials>
            <buffer>VGhpcyBpcyB0aGUgZmlsZSB0byBiZSBzaWduZWQgZm9yIHRlc3Qu</buffer>
            <CAdESPreferences>
                <level>B</level>
            </CAdESPreferences>
        </ser:signCAdES>
    </soapenv:Body>
</soapenv:Envelope>
```

In this example the buffer to sign is "txt" files.

The SOAP response will be:

SOAP-response-signCades

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
    <soap:Body>
        <ns2:signCAdESResponse xmlns:ns2="http://service.ws.name">
<return>MIICKVwYJKoZIhvcNAQcCoIIKSDDCCkQCACExDzANBglhgkBgZQMEAqEFADA2BgkqhkiG9w0BBwGgKQQnVGhpcyBpcyB0aGUgZmlsZSB0byBiZSBzaWduZWQgZm9yIHRlc3QuIIG0DCCBswwgW0oAMCAQICCFzwqTJX1RldMA0GCSqGSIB3DQEBCwUAMH0xJjAkBgNVBAMMHU5hbWlyawFsiENBIEZpcm1hIFF1YwxpZmljYXRhMSAwHgYDVQQLDBdZXJ0aWzpY2F0aW9uIEF1dGhvcml0eTEkMCIGAlUECgbwTmFtaXJpYWwgUy5wLkEuLzAyMDQ2NTcwNDI2MqsWCQYDVQQGEwJVDaEfw0xODAxMjMxNjM3MDBaFw0yNDA0MjMxNjM3MDBaMIGnMQswCQYDVQQGEwJJVDEVMBMGAlUECgwMtK90IFBSRVNFNT1RFMRUwEwYDVQQEDAxERU1PIENR05PTUUxEjaQBgnVbCoMCURFTU8gTkt9NRtBcMBoGA1UEBRMTSVQ6RE1DRE5NM TVUMTBBMjcxTzEfMB0GA1UEAwwWREVNTyBOT01FIERFTU8gQ09HTk9NRTEXMBUGA1UELhMOREVNtZeyMzQ1njc40TAwggEiMA0GCSqGSIB3DQEBAQUAA4IBDwAwggEKAoIBAQD4i6k2DI5cXUjKDIPfx6qf15kDz+wCpWRFnnWcL137vi4KhupGpcBEKvr298xZp82jFwroQ2I4NUkAuGBx7K3XZZwO9mb+qZ2PfIeNzPjHTt/0UOMGe2wP0oEZy1cQdrIxpg4tbv5dPwMrOTrt/OA4 /QuAtH5Uekm007OC+CsefcyhkklupjfABmj4CsUIYf1qa4n4Sak1E8Rtrbz9PjZxJbK902sTjaQnmK95Yv5cED6TtAniVtMks /eLgoEFN8vx62Kh3V+dHHG+4zXfmod3zv10kVL0KAXIFBShve93ohcr/EhspkR3/Yshwp6y5ewCkhbGJPM /SXwdhjdVqAbAgMBAAGjggMjMIIDHzCBogYIKwYBBQUHAQEEgZUwgZIwVAYIKwYBBQUHMAKGSgh0dBzoi8vZG9jcy50ZXN0LmZpcm1hY2VydGEuaXqvZG9jdW1bnRzL05hbW1yaWFsQ0FGaXjtYVF1YwxpZmljYXRhLmNyddA6BggRgEFBQcwAYYuaHR0cDovL29jc3AudGVzdC5axJtYWNLcnRhLm10L29jc3AvY2VydHN0YXR1czAdBqNVHQ4EFgQUvqgLdh6cX6Usi37YmvetDUQ+AcwHwYDVR0jBBgwFoAU2zgIULe2L5bu0+w+tGZUwkqWqd4wLwYIKwYBBQUHAQEEgZUwgZIwVAYIKwYBBQUHAgEWJGh0dHA6Ly93d3cuZmlybWFjZXJ0YS5pdC9tYw1YwxpLU1PlzCCAVIGCCsGAQUFbwICMI1B6CAUAASQbsACAAcAbYAGUAcwb1AG4Adab1ACAywb1AHIAdAbpAGYAAQbjAGEADabvACAA6AAGAHYAYBgsAGkAZABvACAAcwbvAGwAbwAgAHAAZQByACAAZgBpAHIAbQb1ACAAyQbwAHAAbwBzAHQAQAgAGMAbwBuACAAcAbYAG8AYwBLAGQAdQbyAGEAIAbhAHUAdAbvAG0AYQb0AGkAywBhAC4AIABUAGgAaQbzACAAywb1AHIAdAbpAGYAAQbjAGEADab1ACAAbQbhAHkAIAbvAG4AbAB5ACAAyB1ACAAQdQbzAGUAAZAgAGYAbwByACAAadQbuAGEADAB0AGUAbgBkAGUAZAAVAGEadQb0AG8AbQbhAHQAQzbkACAAZAbpAGcAaQb0AGEAbAAgAHMAaQbnAG4AYQb0AHUAcgB1AHMALjBjBgnVHR8EQjBAMD6gPKA6jhodHrw0i8vY3JsLnRlc3QuZmlybWFjZXJ0YS5pdC9GaXjtYUNlcnRhUVhbGlmaWNhdGExLmNybdAOBgnVHQ8BAF8EABMCBkAwDQYJKoZIhvcNAQELBQADggEBAhN0mp8mICiahhf58HEccJzWkjopGyaAERSWFScRbdg1k4of3J0qi3QK47F83ai41jRNc+KBKYP/mUSwEok3dERW7rVH3xKXo7GmCDUm7Hk107B8N+IT1SkniMksvSpkx3GEwedr1vD0Cgqj/MQa8wMP+xoXioBrdIIIsTShk/qi5ecrbdfXNhoeA3z0/vOn7WFpFC6xR+LKwnOEHW/FtcOawcWV8hVNHg77CD+wyOnpypb1HKUOVSwFqDvVx7JF8u2809+m0ySqoZ621ITeTQNCw9km26bMKy7D4VefN3NIQbak8b0ftWzxWsngkviH5MFPSqJW10IZ0jOhPiHntksxggMgMIIDHAIBATCbiTB9MSYwJAYDVQQDBB10Yw1pcmlhbCBDQSBGaXjTYSBRdWfsaWZpY2F0YTEgMB4GA1UECwwQ2VydGlaWNhdGlvbiRb3JpdHkxJDAiBqNVBAoMG05hbWlyaWFsIfIMuc5BLi8wMjA0NjU3MDQyNjELMAkGA1UEBhMCSVQCCFzwqTJX1RldMA0GCSqGSIB3DQEJBTepFw0yMjA4MTAwODAxNTZaMC0GCSqGSIB3DQEJNDeGMB4wDQYJYIZIAWUDBAIBBQChDQYJKoZIhvcNAQELBQAwLwYJKoZIhvcNAQkEMSIEIIyS24577o6HAeqQ5OU2H11F5JMnJaRgd8ISguoamByMIHMbgsgkh9w0BcRALzGbVDCBuTCbtjCBswQgxbkITFBriuSqr8M6xRqZCQn72rMbhDr7ytuXrw186f4wgY4wgYGkfzB9MSYwJAYDVQQDBB10Yw1pcmlhbCBDQSBGaXjtYSBRdWfsaWZpY2F0YTEgMB4GA1UECwwXQ2VydGlmawNhdGlvbiBBdxRob3JpdHkxJDAiBgnVBAoM05hbWlyaWFsIfIMuc5BLi8wMjA0NjU3MDQyNjELMAkGA1UEBhMCSVQCCFzwqTJX1RldMA0GCSqGSIB3DQEBCwUABIIBAIgAfXNg3DxDOPdoe5QtTftTMnV4zU/+cTGlt4xaB2x2/14o3NmkrJHCm4NBDF8XifOo8YtVQYqYNlxDaW5JpjTpqfbWun4wu1dkQqsg6TiRTiy3w/v01oMk/X1sj7H+6wSffcRmIV5dwT1HUx0MRXipa000aCsZTO852xwkhXUB7z8/jaWfUK4bLoz/ckgFmV3YhRLhth7sLWzVjgUELd6ukCiwcftP9R4KEwXYeu4YmBW9pknFDrdGZgTTYchsITLJkNarzl/4JtxXcA7/FALCxuyOHcnYnta+iCw4N3I/E0PIVzQ5XibNraAF0lulJizAlyC+hU4IjADJeApoEE=</return></ns2:signCAdESResponse>
    </soap:Body>
</soap:Envelope>
```

SignCades Detached

If you want make the Cades detached signature, SWS not require all files to sign, but only the hash. The tag "buffer" will be the hash of the file.

For example if we want the cades detached signature of this [PDF](#) the procedure is:

- 1) Calculate the hash of this file, for example with the openssl:

```
openssl dgst -sha256 -binary FILE_TO_BE_SIGN | openssl enc -a
```

And in output will obtain the hash to sign, will be:

```
HASH TO SIGN = msj3f4hJCSELbMkWjkFwNrf0XhkebTnAKaKhx4686DY=
```

- 2) Now can execute the method signCades, using the field "cadesPreferences.detached=true":

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ser="http://service.ws.name">
    <soapenv:Header/>
    <soapenv:Body>
        <ser:signCAdES>
            <credentials>
                <username>YOUR-DEVICE-USERNAME</username>
                <password>YOUR-DEVICE-PASSWORD</password>
            </credentials>
            <buffer>msj3f4hJCSELbMkWjkFwNrf0XhkebTnAKaKhx4686DY=</buffer>
            <CAdESPreferences>
                <detached>true</detached>
            </CAdESPreferences>
        </ser:signCAdES>
    </soapenv:Body>
</soapenv:Envelope>
```

The SOAP response will be:

```

<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <ns2:signCAdESResponse xmlns:ns2="http://service.ws.name/">
      <return>MIIKKQYJKoZIhvCNQcCoIIKGjCCChYCAQEExDzANBglghkgBZQMEAqEFADALBgkqhkiG9w0BBwGggga2MIIGsjCCBJqgAwIBAgIIf
15W0
/FI108wDQYJKoZIhvCNQELBQAwgYcxITAfBgNVBAMMG5hbWlyaWFsIEVVIF1YWyPZml1ZCBDQTEfMB0GA1UECwwVWHJ1c3QgU2VydmljZS
BQcm92aWRlcjEYMBYGA1UBCgwPTmFtaXjPYWwgUy5wLkEuMRoWgAYDVQRhDBFWQVRJVC0wMja0NjU3MDQyNjELMAkGA1UEBhMCSVQwHhcNMTh
wODA1MDc0NjAwWhcNMjUwODA1MDc0NjAwWbjBmMQ0wCwYDVQQQuEwRJRDkyMRUwEwYDVQDDAx0ZXN0IGF6aWVuZGEFxTATBgNVBAoMDHrlc3Qg
YXppZW5kYTEaMBgGA1UEYQwRvkFUSVQtMDAwMDAwMDAxCzAJBgNVBAYTAK1UMIIBIjANBgkqhkiG9w0BAQEFAOCAQ8AMIIBCgKCAQEA4
TXG/VhgZhtRf8HkRmLa2NDFG5CnloPR5yowp66oqQTovMqF
/nbvY+wTOIXxWHYbAL1mTeEqwNTWBwKrGDFe3JP3EJSAnRa8BMUJi5B2JUfud4fSZSaeeJkoCu2ggZ3/64kFdC2yxPlpw
/oKSNjGjPyvhNW2JY9Nt1sUDdV0mHug5uFTQoo423CvmcRSz6kYhrWBKyQ9TGGPwukDqpKhiB+
/0lpL7DVI4X4gNi1gnFQoBbBRG2rSAB8xLxYP
/aWiF8c3VZX5xELIGUmqEFx0QRJ07kr1l1h1MXFWwadRa81ZnQpg5vMAjthxXnr0GyPjcm5xOrbCRwG1hVsQIDAQABo4ICQDCCAjwwgYcGC
CsGAQUFBwEBBhwseTA+BggFBgEFBQcwAoYyaHR0cHM6Ly9kb2NzLm5hbWlyaWFsdHNwLmNvbS9kb2N1bWVudHMvTmFtQ0E0Sy5jcnQwNyIKw
YBBQUHAGGK2h0dHA6Ly9vY3NwLm5hbWlyaWFsdHNwLmNvbS9vY3NwL2N1cnRzdGF0dXMuHQYDVR0OBByEFBT3hX0qb5n0V7hKLCuE5QNzC11
1MB8GA1UdIwQYMBAfG04zbhJUuXnCxtXjPt6Q05BqnzZMIHNBgrBgfFBQcBawSbwDCBvTAIBgYEAI5GAQEWcYGBACORgEDAgeUMAgGBgQA
jKYBBDArBjYEAI5GAQYwCQYHBACORgEGAjCBhAYGBACORgEFMFHowOxY1aHR0cHM6Ly9kb2NzLm5hbWlyaWFsdHNwLmNvbS9kb2N1bWVudHMvU
ERTL1BEU19lbi5wZGYTAwVuMDsWNwh0dHbzoi8vZG9jcy5u1pcmlhbRzcC5jb20vZG9jdW1lbnRzL1BEUy9QRfnfaXQucGRmEwJpdDbAsg
NVHSAEUzBRMDoGcysGAQQBgpprAQIDMCswkQYIKwYBBQUHAgEWHWh0dBzOi8vZG9jcy5u1Yw1pcmlhbRzcC5jb20vMAkGBwQAi+xAAQmwcAY
GBACPegECMDQGA1UdHwQTCMsKaAnoCWG12h0dHA6Ly9jcmwubmFtaXjpyWx0c3AuY29tL0NBNEsuY3JsMA4GA1UdDwEB
/wQEAWIGQDANBqkqhkiG9w0BAQsFAAACAgEAh1PP1QdsAqYEemj8MbHfB8a
/rAG4op1CbP4YsPr4Y5YKxr2Truf4L4KcbFH8KpLPIXzw+2CvzeB2IGc00Ahs10s0d1hQimLKL6SEks3uN3sxq6f
/i2dMS9i1uCLcwyn8ZpCmvp2bqqj
/fCqZdoiOIF1WI0uqRUF1Lsc95M+FMrWXzDovQS9Y8IerHiwbnnq3fI3VuYdvKhx0Lri17Vcpmvk5zfXxgsE9FmmH
/aJvdcrjPAjI8Sjzz1vsB74MmqTFk5Pnd1n1OHGw8KaTeELpuOlmxsz2qPFO7inoSBuKMEFz3W31vB3UnKuRbFEutjyFYgYTpPTQcsX0kaJM
u/S76hRLTpV5zs+3AFgfCGbpH7kTCW1MTNT4oY1WEXYctF4Mqg8giMaBetf06zB954Qqu3eqFv1DZ0HClRbL
/F2at61rmnSXSBzRkev+VevKUGjIqThMq51oQSP8mxCquUvaa4epJ
/tDzmLYdYwnoN7fzofA4ZkAQPLvt4Kv4IML612CM0kK+1mkEuhcTJN0h816Kax40q+Ld8qjgmvGAI
/28dfkIpQS7gm70N1nCcKdKmngcQ881LWYnbY
/ba5BCwXeqWKp1+oqorrqFYiwONSH9SmnFI0gG61eEjL5k8nArkKtNefScw5tv1LZXAC4uaZjD++iJ8jvMPn7khf9qKR8xggM3MIIDMwIBAT
CB1DCBhzEhMB8GA1UEAwYTMftaXjPYWwgRVUgUXVhbGlmaWVkiENBR8wHQYDVLQDBZUcnVzdCBTZXJ2aWN1lFByb3ZpZGVyMRgwFgYDVQQ
KDA9OYw1pcmlhbCBTLnAuQS4xGjAYBgNVBGEVEVZBVE1ULTAyMDQ2NTcwNDI2MQswCQYDVQQGEwJJVAIf15W0
/FI108wDQYJYIZIAWUDBAIBBQcgFzMBgGCSqGS1b3DQEJAzELBgkqhkiG9w0BbwEwHAYJKoZIhvCNQkFMQ8XDTIzMDMzMDA3NTA0MVowLQ
YJKoZIhvCNQk0MSAwHjANBglghkgBZQMEAqEFAKENBgkqhkiG9w0BAQsFADAvBgkqhkiG9w0BCQQxIgQgmsj3f4hJCSELbMkWjkFwNrfoXhk
ebTnAKaKhx4686DYwgdgGCyqGS1b3DQEJEAIvMYHIMIHFMIHCMIG/BCADIK96sQnxsO113GxGXQqxA66Ryjv45gg1ab
/b9RM4PjCBmjCbjasBjJCbhzEhMB8GA1UEAwYTMftaXjPYWwgRVUgUXVhbGlmaWVkiENBR8wHQYDVLQDBZUcnVzdCBTZXJ2aWN1lFByb3Z
pZGVyMRgwFgYDVQQKDA9OYw1pcmlhbCBTLnAuQS4xGjAYBgNVBGEVEVZBVE1ULTAyMDQ2NTcwNDI2MQswCQYDVQQGEwJJVAIf15W0
/FI108wDQYJKoZIhvCNQELBQAEGgEAqEnv3NnV1r1l1vnjrNyI85MjqzbaS3bt6FcfczREP+hmBSQ7DhXXqszRu2vJ+IkYod
/MhovvTwb2s6Y2uczugkVN3Jc
/uswUf61I1CQn8F6bsDt15xaTdZY75hu6mm8SJdNGyrTto7Zwf19vm3yTgt5Z3M+ORM4aHqsBYHVZwlqTyXR58uz8udSMznN2Cfrk+jCbMGiv
TCTMhujCFlySocOn/ZWB1KOEGK
/m70ok9qZ40w9VQJOBbWEVLU4A2FhNSnJtnqky6jPEhnAZ9ssazJ4fhT8o4fUbs71AUUnBz8A02BV5AcgK9pXvlrcx8p0wGEyzaxo26RFs9Aoc
pNhhE3rA==</return>
    </ns2:signCAdESResponse>
  </soap:Body>
</soap:Envelope>

```

In the tag "return" there is the cades detached signature, you MUST decode the content of this tag and will obtain this file: [Cades_detached_PDF_SampleHelloWorld.p7s](#)

3) Finally we have the cades detached signature and we ready to verify the signature at this [link](#):

- field "signed file" upload the detached signature
- field "original file" upload the file "FILE_TO_BE_SIGN"

And the output will be:

SignXades

The SOAP request for create Xades signature:

SOAP-request-signXades

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ser="http://service.ws.name" />
  <soapenv:Header/>
  <soapenv:Body>
    <ser:signXAdES>
      <credentials>
        <username>YOUR-DEVICE-NAME</username>
        <password>YOUR-DEVICE-PASSWORD</password>
      </credentials>
      <buffer>PD94bWwgdmVyc2lvbj0iMS4wIiBlbmNvZGluZz0iVVRGLTgiPz4NCjxUZWxlbWF0aWNvPg0KCTx0bz5Ub3ZlPC90bz4NCgk8ZnJvbT5KYW5pPC9mcm9tPg0KCTxoZWFKaW5nP1JlbWluZGVyPC9oZWFKaW5nPg0KCTxib2R5PkRvbid0IGZvcmdldCBtZSB0aGlzIHdlZWtlbmQhPC9ib2R5Pg0KPC9UZWxlbWF0aWNvPg==</buffer>
      <XAdESPreferences>
        <level>B</level>
      </XAdESPreferences>
    </ser:signXAdES>
  </soapenv:Body>
</soapenv:Envelope>
```

The SOAP response will be:

SOAP-response-signXades

```
<?xml version="1.0" encoding="UTF-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <ns2:signCAdESResponse xmlns:ns2="http://service.ws.nam/">

<return>MIIKVwYJKoZIhvcNAQcCoIIKSDCCKQCAQEExDzANBglhgkqBZQMEAqEFADA2BqkqhkiG9w0BBwGgKQQnVGhpcyBpcyB0aGUgZmlsZ
SB0byBzSBzaWduZWQgZm9yIHRlc3QuoIIG0DCCBswwgW0oAMCAQICCFzwqTJXlRldMA0GCSqGSIB3DQEBCwUAMH0xjAkBgNVBAMMHU5hbW
lyWFsIENBIEZpcmlhIFF1YWxpZmljYXRhMSAwHgYDVQQLDbdZXJ0aWZpY2F0aW9uIEFdGhvcml0eTEkMCIGA1UECgbwTmFtaXJpYWwgUy5
wLkEuLzAyMDQ2NTcwNDI2MQswCQYDVQQGEwJUVDAeFw0xODAxMjMxNjM3MDBaFw0yNDA0MjMxNjM3MDBaMIGnMqswCQYDVQQGEwJJVDEVMBMG
A1UECgwMTk90IFBSRVNFt1RFMRUwEwYDVQQEDAxEU1PIENPR05PTUUxEjaQBqNVBCoMCURFTU8gT9NRTEcMBoGA1UEBRMTSVQ6RE1DRE5NM
TVUMTBBMjcxTzEFMB0GA1UEAwwWRREVNTyBOT01FIERFTU8gQ09HTk9NRTEXMBUGA1UELhMOREVNTzEyMzQ1Njc4OTAwggEiMA0GCSqGSIB3DQ
EBAQUAA4IBDwAwggEKAoIBAQD4i6k2DI5cXUjKDipfx6qf15kDz+wCpWRFnnWcL137vi4KhupGpcBEkvr298xZp82jfFwroQ2I4NUkAuGBx7K3
XZZwO9mb+qZ2PfIeNzPjHTt/0UOMGe2wP0oEZY1cQdrIxpg4tBbv5dPwMrOTrt/OA4
/QuAtH5Uekm007OC+CsefcyhklupjfABmj4CsUIYf1qa4n4Sak1E8Rtrbz9PjZxJbK902StjaQnmK95Yv5cED6TtAniVtMKs
/eLgoEFN8vx62Kh3V+dHHG+4zXfmod3zv1okVL0KAXFBShve93ohcr/EhspkR3/YsHwP6y5EwCkhbGJPM
/SxWdhjdVqAbAgMBAAGjggMjMIIDHhZCBogYIKwYBBQUHAQEEgZUwgZIwVAYIKwYBBQUHMAKGSgh0dBzoi8vZG9jcy50ZXN0LmZpcmlhY2Vyd
GEuaXqvZG9jdW1lbNrzL05hbWlyaWFsQ0FGaXjtYVF1YWxpZmljYXRhLmNyda6BggBgfFBQcwAYYuHR0cDovL29j3AudGvzdC5maXjtYw
N1cnRh1m10L29j3AvY2VydHN0YXRlczaBgNVHQ4EFgQUvqgLdh6cx6Usi37YmvetodUQ+AcwHwYDVR0jBbgwFoAU2zgIULe2L5bu0+w+tGZ
UwkqWqd4wLwYIKwYBBQUHAQMEIzAhMaGgBQAjkYBATLBgYEAI5GAQMCARQwCAYGBACORGEMIIBqgYDVROgBIIBotCCAZ0wggGZBgsrBgeEE
AYKaawEBAzCCAYgwMAYIKwYBBQUHAgEWJGh0dHA6Ly93d3cuZmlybWFjZXJ0YS5pcD9tYw51YWxpLU1PLzCCAVIGCCsGAQUBFwICMIIBR6CA
UAASQBsACAAcAbYAGUAcwBLAG4AdAb1ACAAbQb1AHIAAdAbpAGYAAQbjAGEAdAbvACAA6AAgAHYAYQBsAGkAZABvACAcbwAgwAbwAgAHAAZQ
ByACAAZgBpAHIAbQb1ACAAyQBWAAAbwBzAHQAZQAgAGMAbwBuACAAcAbYAG8AywB1AGQadQByAGEAIAbAHUAdAbvAg0AYQb0AGkAYwBhAC4
AIABUAGgAaQbzACAAywb1AHIAAdAbpAGYAAQbjAGEAdAb1ACAAbQbAHKAIAbVag4AbAB5ACAAygB1ACAAQbzAGUAZAAgAGYAbwByACAAQbU
AGEAdAb0AGUAbgBkAGUAZAAvAGEAdQb0AG8AbQbhAHQAZQbKACAAZAbPAGcAaQb0AGEAbAAgAHMAaQbnAG4AYQb0AHUAcgB1AHMALjB1BgnNVH
R8EQjBAMD6gPKA6jhodHRwOi8vY3JsLnRlc3QuZnlybWFjZXJ0YS5pdC9GaXjtYUN1cnRhUXvhGlmaWNhdGEgLmNybDAOgNVHQ8BaF8EBA
MCBkAwDQYJKoZIhvcNAQELBQADggEBAhN0mp8mICiahf58HeccjzWkjopGyaAERSwFScRdg1k4Of3J0qi3QK47F83ai41jRNc+KBKP
/mUSwEok3dERW7rVH3xKXo7GmCDUm7Hk107B8N+IT1SkniMksvSpkx3GEwedr1VD0Cgqj/MQa8wMP+xoXioBrdIIstShk
/qi5ecrbdfXNhoeA3z0/vOn7WFPC6xR+LKwnOEHW
/FtcOawcWV8hVNhG77CD+wyOnpypb1HKUOvSwFqDvvX7JF8u2809+m0ySqoZ621ITeTQNCw9km26bMKy7D4VefN3NIQbak8b0ftWzxWsngkvi
H5MFPSq5JWI0IZ0jOhPiHntksxggMgMIIDHAIbATCbiTB9MSYwJAYDVQQDDB1OYW1pcmlhbCBDQSBGaXjtYSBRdWFsaWZpY2F0YTEgMB4GA1U
ECwwXQ2VydG1maWNhdG1vb1BdxRob3JpdHkxJDA1BgnvBACMG05hbw1yaWFs1fMucc5Bli8wMjA0NjU3MDQyNjELMAkGA1UEBhMCsvQCCFzw
qTJXlRldMA0GCWCgsAF1AwQCAQUAoIIBzzAYBqkqhkiG9w0BCQmxwYJKoZIhvcNAQcBMBwGCSqGSIB3DQEJBTEPFw0yMjA4MTAwODAxNTZaM
C0GCSqGSIB3DQEJNDEgMB4wDQYJY1ZIAWDBA1BBQChDQYJkoZIhvcNAQELBQAwLwYJKoZIhvcNAQkEMSIEIIyS24577o6HaeqQ50U2H1f5J
MnJaRgd8ISguoamBYMIHBgsqhkIG9w0BCRAclzGbVDCBuTCbtjCBswQgxkbkITFBriusSqr8M6xRqZCQN72rMbhDr7YtuXrw186f4wgY4wgYG
kfzb9MSYwJAYDVQQDDB1OYW1pcmlhbCBDQSBGaXjtYSBRdWFsaWZpY2F0YTEgMB4GA1UECwwXQ2VydG1maWNhdG1vb1BdxRob3JpdHkxJDA1
BgNVBAoMG05hbWlyaWFs1FMucC5BLi8wMjA0NjU3MDQyNjELMAkGA1UEBhMCsvQCCFzwqTJXlRldMA0GCSqGSIB3DQEBCwUABIIBAigAfXNg3
DxOPdoe5QtffTMnv4zU/+cTGLT4xaB2x2/14o3NmkrJHCMq4NBDF8XifOo8YtrvQYqYNlxDaW5JpjTpqfbWun4wu1dkQqsg6TiRTiy3w
/v01oMk/X1sj7H+6wSffcRmIV5dwT1lHuX0MRXipa000aCsZTO852xwkXUB7z8/jaWfUK4bLoz
/ckgFmV3YhRLhth7sLwzVjgUEld6ukCiwcftP9R4KEwXEYu4YmBw9pknFDrgZgTTYChsITLTjkNarzl/4JtxXcA7
/FALCxuyOHcnYnta+iCw4N3I/E0PIVzQ5XibNraAF0lulJ1zAlyC+hU4IjADJeApoEE=</return>
  </ns2:signCAdESResponse>
  </soap:Body>
</soap:Envelope>
```

Below is the example of Xades Signature Level B:

[signXadesList-Level-B.txt](#)

Below, there is an example of Xades using the preferences:

- signElement
- signatureId

We sign the XML parts with "Id=tagToSign" specified on Soap request by:

```
<signElement>tagToSign</signElement>
```

And we set the id of the digital signature to:

```
<signatureId>idOfSignature</signatureId>
```

The full example:

[signXadesList-on-specifiedTagId.xml](#)

SignPkcs1

The SOAP request for create raw signature (PKCS1):

SOAP-request-signPkcs1

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ser="http://service.ws.name">
    <soapenv:Header/>
    <soapenv:Body>
        <ser:signPkcs1>
            <credentials>
                <password>YOUR-DEVICE-PASSWORD</password>
                <username>YOUR-DEVICE-NAME</username>
            </credentials>
            <hash>c1fbd2b034abaea9ec99535394f21bb556edcf1833c680ebdfcc76e1e635844b</hash>
            <preferences>
                <hashAlgorithm>SHA256</hashAlgorithm>
            </preferences>
        </ser:signPkcs1>
    </soapenv:Body>
</soapenv:Envelope>
```

The SOAP response will be:

SOAP-response-signPkcs1

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
    <soap:Body>
        <ns2:signPkcs1Response xmlns:ns2="http://service.ws.name">
            <return>p1kGoLorh0dGXKOFV4NAAZSsFxEl3YEbSXSI8tlWCSkoDwKLN9wHeKaosAuuJMuL6Vl61AxiEoBFGh5
            /ufQLFKWaiMqvB5YD62yXdp8f2dtMeCfqZGwLEV4ci/kdliMvE2eYiGornXk9NoF+eg/+h6W8TZWSnYrjp0YlFl0JxOG1
            /r5qr+OVvWQ7n73fo3Qe6Rjw
            /TuS15V+WDaboctuCIwlK5gM8R4cT552PrNLsnVYmwR4epSUTx5VYwag6IhEHYPUtUkbMGpvN+0C0cZY7NqOHPfqgrqks0HkMr4Z99DQAKOqs
            ZHg+h4AIGvgqFGsLxSRWCbT2G7ve+qX7IVgg==</return>
        </ns2:signPkcs1Response>
    </soap:Body>
</soap:Envelope>
```

Manage signer device

In this section you can find the example of SOAP request associated to the information about signer device, timestamp, errors

Method change password on automatic/eseal signature

Below an example of change password on automatic signer device (AHIP22021318589386):

REQUEST-AUTOMATIC/ESEAL-changePassword

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ser="http://service.ws.name">
  <soapenv:Header/>
  <soapenv:Body>
    <ser:changePassword>
      <credentials>
        <password>13572468</password>
        <securityCode>8214260012</securityCode>
        <username>AHIP12345</username>
      </credentials>
      <newPassword>NEWPASSWORD123</newPassword>
    </ser:changePassword>
  </soapenv:Body>
</soapenv:Envelope>
```

After this execution, the password/PIN of the device signature will be changed from "13572468" (old password) to "NEWPASSWORD123".

Method change password on remote signature

Below an example of change password on remote signer device (RHI3644468199007):

REQUEST-AUTOMATIC/ESEAL-changePassword

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ser="http://service.ws.name">
  <soapenv:Header/>
  <soapenv:Body>
    <ser:changePassword>
      <credentials>
        <username>YOUR-DEVICE-NAME</username>
        <password>YOUR-DEVICE-PASSWORD</password>
        <idOtp>YOUR-ID-OTP</idOtp>
        <otp>876321</otp>
      </credentials>
      <newPassword>NEWPASSWORD123</newPassword>
    </ser:changePassword>
  </soapenv:Body>
</soapenv:Envelope>
```

After this execution the password/PIN of the device signature will be changed from "847291742" (old password) to "NEWPASSWORD123".

Method getCertificate

Below the SOAP request example for obtain the certificate associate to signer device: "SHI7493852568871"

SOAP-request-getCertificate

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ser="http://service.ws.name">
    <soapenv:Header/>
    <soapenv:Body>
        <ser:getCertificate>
            <credentials>
                <username>SHI12345</username>
            </credentials>
        </ser:getCertificate>
    </soapenv:Body>
</soapenv:Envelope>
```

The SOAP response will be:

SOAP-response-getCertificate

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
    <soap:Body>
        <ns2:getCertificateResponse xmlns:ns2="http://service.ws.name">
            <return>MIIGljC/CB6gAwIBAgIIKSO
/4EWMpWgQDYJKoZihvcNAQELBQAwgYwxJjakBgNVBAMMHVRlc3QgTmFtaXJpYWwgRVUgUXVhbGImaWVkiENBMR8wHQYDVQQLDBZUcnVzdCBTZXJ2awN1IFByb3ZpZGVyMRgwFgYDVQQKDA9OYW1pcmlhbCBTLnAuQS4xGjAYBgNVBGEDEVZBVE1ULTAyMDQ2NTcwNDI2MQswCQYDVQQGEwJJVDAAefw0xNzExMjQwOTAwMDBaFw0yMzExMjQwOTAwMDBaMG0xCzAxBgNVBAYTAk1UMRowGAYDVQRhDBFWQVRJVC0wMja0NjU3MDQyOTEYMBYGA1UECgwPTmFtaXJpYWwgcy5wLmeEuMRgwFgYDVQQDDA9uYW1pcmlhbCBzLnAuYS4xdjAMBgNVBC4TBULEMTMzMIIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIIBCgKCAQEApGhU87UKgtDTBTy13rv9GKZk1+YUFuHPGJxFI3TxZrimmdtyOhu11400Y1mMLE5DZvgFxkRf1w+Gk0ZLJYkG4FvTo5khqu+vsd0wyh/Hkpei0wLfnKhCWhYOpml wahh3a31U1qFv1ZJNulybRRf8N4+yAQQ2D1NL7
/B1VAggq1gVt1uXjxvas8MAUjJDbg3eQYXkSn2FJbveDRs127eeXuu+uabqt/GU/Y77Rvd7IKW6aH+dOF0oU/s7
/dto7q393rPU30pwfvA3A1107C/jwFaSgIDdyhtGviT6jbakk
/SM26QfkNQShrHsS9S9hCn3DZUfg53I4YGrnOHTjFnTKWIDAQABo4ICWDCCAlQwgZQGCCsGAQUFBwEBBIGHMIGEMEMGCCsGAQUFBzACHjdodHRwczoVl2RvY3MudGVzdC5uYW1pcmlhbHRzcc5jb20vZg9jdW11bnRzL05hbUNBNEsuY3J0MD0GCCsGAQUFBzABhjFodHRwczovL29jc3AudGVzdC5uYW1pcmlhbHRzcc5jb20vB2NzcC9jZXJ0c3RhDHVzMB0GA1UdDgQWBDRM2g4FW+kjg7XcAbdsY2fK3pqG8TAfBgNVHSMEGDAwBt8Hvd/XQEv+xufWSmAjAoalhw+njCBzgYIKwYBBQUHAQMGEcEwgb4wCAYGBACORgEBMAsGBgQajkYBAwIBFDATBgyEAI5GAQYwCQYHBCORgEGAjCBjwYGBACORgEFMIGEMEAWo mh0dHBzoi8vZg9jcy50ZXN0Lm5hbWlyaWFsdHNwLnNbS9kb2N1bWVuudHMvUERTL1BEU191bi5wZGYTA mVuMEAwo mh0dHBzoi8vZg9jcy50ZXN0Lm5hbWlyaWFsdHNwLnNbS9kb2N1bWVuudHMvUERTL1BEU19pdC5wZGYTA m10MF8GA1UDiARYMFYwPwYLKwYBBA GCmmsBAGewMDAuBgrBgeFBQccARYiaHR0cHM6Ly9kb2NzLnRlc3QubmFtaXJpYWx0c3AuY29tLzAJBgCEAIvsQAEBCAGBgQaj3oBATA5BgnVHR8EMjAwMC6gLKAqhiodHRwOi8vY3JsLnRlc3QubmFtaXJpYWx0c3AuY29tLONBNEsuY3JsMA4GA1UdDwEB
/wQEawIGQDANBgkqhkiG9w0BAQsFAAOCAgEAE2+uvSjsQZwx2R+tH76IfrrPwfGuJY1FAh044gu7evJ6
//h7EQc0Y6wSzMHM91mfOpnuHD2BP9NftA+qBqqZnwpcLn3S+3WiM7L7wBG0LJE20Ji
/fw0JUzTojtDQ24h64kQuv+u9cygB4JtFWAZ74WbMjm eG15WtBbo9zUx5Z59qsM1+BuXUW23u7lbzIyZLKAL6w5qSrBjhafBuKtwNIYfMojtWK3kOSikhktoA1K/s74xp9ofUpM4EhtjXHkQXN754dUbXbh2zYtDC4qw7LvkUnx2y2Yh8tOs v+N0c5kRMHvr0IjMzuuY7
/Eu00ivR7ncUg5ABA9TQ8RA7pNw9ID+t9MHrsbEMGLYRWAsylARVbxPdp gZcCz xas6HE+J JWGh+LEBFDJiEPdSuvYY/bLML3G5wan/cTYic0TK/HGJxzqoAxUB1gks3eUmvsTxzOzyTmJxjJBBWSTU5ulRjk
/oexLEjYprXeiPjx0gB6J+2+LoBsA1KMgHLWZ9NBAqZ7EvvZi3SDcOA1ijtjDRRNbhvIl naV3e
/1W1YLEJaAUghNQBYzf2hyv8ikDv1Wb3YGMl2ruu5BDAn7YpM0+sMFMc jU/ImN64L1oLYJJ8d79UqJ0AS5bc+OzbncpTtd5sncvCKWh/xg5Qnc2ZY9djDgk/HhDUqTVRkGLua8gN=</return>
        </ns2:getCertificateResponse>
    </soap:Body>
</soap:Envelope>
```

In the tag "return" there is the base64 associated to the signer device.

Method getAvailableSignatures

Below the SOAP request example for obtain the certificate associate to signer device: "SHI7493852568871"

SOAP-request-getAvailableSignatures

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ser="http://service.ws.name">
    <soapenv:Header/>
    <soapenv:Body>
        <ser:getAvailableSignatures>
            <credentials>
                <username>SHI12345</username>
            </credentials>
        </ser:getAvailableSignatures>
    </soapenv:Body>
</soapenv:Envelope>
```

The SOAP response will be:

SOAP-response-getAvailableSignatures

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
    <soap:Body>
        <ns2:getAvailableSignaturesResponse xmlns:ns2="http://service.ws.name">
            <return>996413</return>
        </ns2:getAvailableSignaturesResponse>
    </soap:Body>
</soap:Envelope>
```

In the tag "return" there is the number of signatures available.

Method getSignatures

Below the SOAP request example for obtain the certificate associate to signer device: "SHI7493852568871"

SOAP-request-getSignatures

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ser="http://service.ws.name">
    <soapenv:Header/>
    <soapenv:Body>
        <ser:getSignatures>
            <credentials>
                <username>SHI12345</username>
            </credentials>
        </ser:getSignatures>
    </soapenv:Body>
</soapenv:Envelope>
```

The SOAP response will be:

SOAP-response-getSignatures

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
    <soap:Body>
        <ns2:getSignaturesResponse xmlns:ns2="http://service.ws.name">
            <return>3587</return>
        </ns2:getSignaturesResponse>
    </soap:Body>
</soap:Envelope>
```

In the tag "return" there is the number of signatures apposed since the device has been created.

Manage errors in SWS

In this section will be described how manage the errors in SWS and obtain the info about errors.

If the SOAP request is not correct in output will obtain the SOAP response with this structure:

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <soap:Fault>
      <faultcode>soap:Server</faultcode>
      <faultstring>Codice OTP errato, riprovare con il prossimo codice</faultstring>
      <detail>
        <ns2:WSEException xmlns:ns2="http://service.ws.nam/">
          <error>44</error>
          <message>Codice OTP errato, riprovare con il prossimo codice</message>
        </ns2:WSEException>
      </detail>
    </soap:Fault>
  </soap:Body>
</soap:Envelope>
```

This SOAP response contains:

- error code = 44
- error message = "Codice OTP errato, riprovare con il prossimo codice"

By default SOAP response on SWS contains the error message in italian, but is possible to obtain the error message in other different languages using the method "getErrors".

Method getErrors

This method permits to obtain the list of all errors in a specified language or all languages.

For example if we want obtain the list of all errors in english language the SOAP request will be:

SOAP-request-getErrors

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ser="http://service.ws.nam/">
  <soapenv:Header/>
  <soapenv:Body>
    <ser:getErrors>
      <lang>EN</lang>
    </ser:getErrors>
  </soapenv:Body>
</soapenv:Envelope>
```

In output will obtain a list of all errors in a specified language:

SOAP-response-getErrors

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <ns2:getErrorsResponse xmlns:ns2="http://service.ws.nam/">
      <return>
        <errorCode>0</errorCode>
        <errorLanguage>EN</errorLanguage>
        <errorLanguage2>ENG</errorLanguage2>
        <errorText>No errors found</errorText>
      </return>
      <return>
        <errorCode>1</errorCode>
        <errorLanguage>EN</errorLanguage>
        <errorLanguage2>ENG</errorLanguage2>
        <errorText>Generic error</errorText>
      </return>
      .....
      .....
      .....
      <return>
        <errorCode>1007</errorCode>
        <errorLanguage>EN</errorLanguage>
        <errorLanguage2>ENG</errorLanguage2>
        <errorText>The OTP device was not activated</errorText>
      </return>
      <return>
        <errorCode>1009</errorCode>
        <errorLanguage>EN</errorLanguage>
        <errorLanguage2>ENG</errorLanguage2>
        <errorText>Unavailable attempts for the OTP device</errorText>
      </return>
      <return>
        <errorCode>1016</errorCode>
        <errorLanguage>EN</errorLanguage>
        <errorLanguage2>ENG</errorLanguage2>
        <errorText>The OTP device was not associated to the holder</errorText>
      </return>
    </ns2:getErrorsResponse>
  </soap:Body>
</soap:Envelope>
```

With this method is possible to obtain the description associated to a specified error code (in this example 44). Below the example:

SOAP-request-getErrors-on-specific-errorCode

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ser="http://service.ws.nam">
  <soapenv:Header/>
  <soapenv:Body>
    <ser:getErrors>
      <lang>EN</lang>
      <errorCode>44</errorCode>
    </ser:getErrors>
  </soapenv:Body>
</soapenv:Envelope>
```

The SOAP response will be:

SOAP-request-getErrors-on-specific-errorCode

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <ns2:getErrorsResponse xmlns:ns2="http://service.ws.nam/">
      <return>
        <errorCode>44</errorCode>
        <errorLanguage>EN</errorLanguage>
        <errorLanguage2>ENG</errorLanguage2>
        <errorText>Wrong OTP code, try again with the next code</errorText>
      </return>
    </ns2:getErrorsResponse>
  </soap:Body>
</soap:Envelope>
```

Methods for timestamp

Below the SOAP request for apply timestamp and get the timestamps available

Apply timestamp

Below an example of SOAP request for apply timestamp. In output will have the timestamp in TSD format

SOAP-request-timestamp

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ser="http://service.ws.nam/">
  <soapenv:Header/>
  <soapenv:Body>
    <ser:timestamp>
      <content>BASE64-FILE-TO-APPLY-TIMESTAMP</content>
      <preferences>
        <outputAsTSD>true</outputAsTSD>
        <timestampHashAlgo>SHA-256</timestampHashAlgo>
        <timestampUrl>TSA-URL</timestampUrl>
        <timestampUsername>TSA-USERNAME</timestampUsername>
        <timestampPassword>TSA-PASSWORD</timestampPassword>
      </preferences>
    </ser:timestamp>
  </soapenv:Body>
</soapenv:Envelope>
```

In output will obtain the TSD.

NOTE:

The TSA-URL for PROD environment is:

tsa-url-prod

```
https://timestamp.namirialtsp.com
```

While the TSA-URL for TEST environment is:

tsa-url-test

<https://timestamp.test.namirialtsp.com>

Method getAvailableTimestamps

This method permits to obtain the timestamp available. Below an example:

SOAP-request-getAvailableTimestamps

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ser="http://service.ws.nam
/">
  <soapenv:Header/>
  <soapenv:Body>
    <ser:getAvailableTimestamps>
      <preferences>
        <timestampUrl>https://timestamp.test.namirialtsp.com/enquiry</timestampUrl>
        <timestampUsername>TSA-USERNAME</timestampUsername>
        <timestampPassword>TSA-PASSWORD</timestampPassword>
      </preferences>
    </ser:getAvailableTimestamps>
  </soapenv:Body>
</soapenv:Envelope>
```

The SOAP response will contain the number of timestamp available associate to TSA-USERNAME.

NOTE: if you are checking the PROD TSA account the timestampURL will be:

timestampUrl-PROD

<https://timestamp.namirialtsp.com/enquiry>

Methods for utilities

Below the utilities to extract info about file

Method getAllSignatureFieldsWithPreferences

This method permits to obtain the extract all info about signature fields of a PDF document available. Below an example:

SOAP-request-getAllSignatureFieldsWithPreferences

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ser="http://service.ws.name">
  <soapenv:Header/>
  <soapenv:Body>
    <ser:getAllSignatureFieldsWithPreferences>
      <buffer>BASE64-FILE-TO-EXTRACT-INFO</buffer>
      <preferences>
        <encryptionPassword>string</encryptionPassword>
        <withCertificate>boolean</withCertificate>
        <withDetails>boolean</withDetails>
      </preferences>
    </ser:getAllSignatureFieldsWithPreferences>
  </soapenv:Body>
</soapenv:Envelope>
```

The response will be:

SOAP-response GetAllSignatureFieldsWithPreferences

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <ns2:getAllSignatureFieldsWithPreferencesResponse xmlns:ns2="http://service.ws.nam/">
      <return>
        <identifier>SignatureField-1</identifier>
        <signed>false</signed>
      </return>
      <return>
        <identifier>SignatureField-2</identifier>
        <signatureDetails>
          <appearance>
            <height>50.0</height>
            <width>200.0</width>
            <x>100.0</x>
            <y>100.0</y>
          </appearance>
        </signatureDetails>
      </return>
    </ns2:getAllSignatureFieldsWithPreferencesResponse>
  </soap:Body>
</soap:Envelope>
```

Method getAvailableSignatureFields

This method permits to obtain the extract all info about signature fields of a PDF document available. Below an example:

SOAP-request-getAvailableSignatureFields

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ser="http://service.ws.name">
  <soapenv:Header/>
  <soapenv:Body>
    <ser:getAvailableSignatureFields>
      <buffer>BASE64-FILE-TO-EXTRACT-INFO</buffer>
      <encryptionPassword>string</encryptionPassword>
    </ser:getAvailableSignatureFields>
  </soapenv:Body>
</soapenv:Envelope>
```

The response will be:

SOAP-response-getAvailableSignatureFields

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <ns2:getAvailableSignatureFieldsResponse xmlns:ns2="http://service.ws.name">
      <return>SignatureField-1</return>
      <return>SignatureField-3</return>
    </ns2:getAvailableSignatureFieldsResponse>
  </soap:Body>
</soap:Envelope>
```

For example, you can test this request using this [pdf](#)

Examples (source code)

Below will find the links contains the source code with examples.

Java:

[To add on CMS repo](#)

Php:

C#: https://cms.firmacerta.it/download/sws_cnet.zip

C# (for SaaS instance): <https://cms.firmacerta.it/download/SignEngineWebClientSaaS.zip>