



Digitaliseringsstyrelsen

Nemlog-in

Nemlog-in STS

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1 Introduction

The purpose of this document is to describe how service providers and web service consumers can test the integration to the Security Token Service from here on named STS in the Nemlog-in integration test environment.

The audience is it-technicians who is going to perform the technical integration and testing and it is assumed that the reader already have knowledge about OIO Identity-based Web Services.

OIO Identity-based Web Services description and detailed information about the different usage scenarios are documented on digitaliser.dk [OIOIDWS].

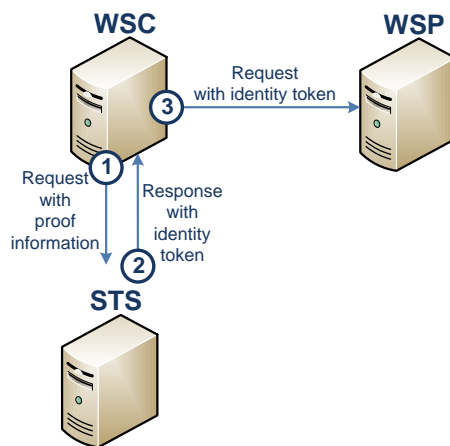
The document consists of the following sections:

- Section 2 describes the service and service methods
- Section 3 contains the configuration needed to call the STS service in the integration test environment
- Section 4 describes the test data available for the STS service

2 Service description

The Nemlog-in2 STS Service exposes a method for exchanging security tokens that can be used access specific web services.

The figure below illustrates the basic processing model:



Processing model and usage scenarios are described in detail in [STS-RULES] sections 2.1 and 2.2.

2.1 IssueToken

The IssueToken method is used to exchange a security token to an identity token usable with a specific web service provider.

Syntax:

IssueToken(stsRequest1 request)

- stsRequest1 message is described in detail in [STS-RULES] section 2.3

Returns:

stsResponse

- a security token containing the identity token for usage with the specified web service provider. The format is described in detail in [STS-RULES] section 2.5

Fault:

The STS returns WSTrust faultcodes.

Fault code	Fault string	Description
wst:InvalidRequest	The request was invalid or malformed	Validation of message failed with missing/illegal elements, attributes or values.
Wst:FailedAuthentication	Authentication failed	Sessionid, signature, cvr or certificatetype errors
wst:RequestFailed	The specified request failed	STS service failures frontend/backend
wst:InvalidSecurityToken	Security token has been revoked	Not used
wst:BadRequest	The specified RequestSecurityToken is not understood.	Message does not conform to general wstrust schema
wst:ExpiredData	The request data is out-of-date	If Envelope/Header/Security/ Timestamp/Expires value is understood but not accepted this error will be returned Or If the NotOnOrAfter-attribute is understood but exceeded on either Envelope/RequestSecurityToken/ActAs/Assertion/Subject/SubjectConfirmationData or Envelope/RequestSecurityToken/ActAs/Assertion/Conditions
wst:InvalidTimeRange	The requested time range is invalid or unsupported	If unsupported or invalid values in Envelope/Body/RequestSecurityToken/LifeTime will return this error. (Requested lifetime will be overridden with default sts lifetime policy)

3 Configuration

3.1 Creating a WSC service for Integration test environment

To execute a STS call the proper registration of your service according to the test scenario must be configured and migrated to integration test in the CSS – "Tilslutning and administration" system.

Please refer to the user manual [CSS – USERMANUAL] for a more detailed description on how to accomplish this.

For the three scenarios there are different requirements for the WSC service configuration:

- Bootstrap token scenario
In this scenario your service must be configured to have the `urn:liberty:disco:2006-08:DiscoveryEPR` attribute asserted, which will contain the bootstrap token from Nemlogin used for subsequent STS calls.
- Local token scenario
In this scenario the user identity is proofed by a bootstrap token that is obtained from WSC's local STS hosted by the WSC organization itself. The local STS must be trusted by Nemlog-in STS. The local STS must be registered as WSC in Nemlog-in CSS and enter terms and conditions with Digitaliseringsstyrelsen.
- Signature scenario
In this scenario the user identity is proofed by the user signing the request to Nemlog-in STS. The scenario contains no bootstrap tokens. The WSC constitutes in this scenario any application hosted by any organization and no trust is established directly between WSC and Nemlog-in STS.

3.2 Binding

Connection to the web services is only allowed via SSL.

URL to the STS web service in integration test environment:

<https://SecureTokenService.test-nemlog-in.dk/SecurityTokenService.svc>

URL to STS web service in Production:

<https://SecureTokenService.nemlog-in.dk/SecurityTokenService.svc>

The STS used SOAP version 1.1 [SOAP11]. Hence the STS expects the following http headers and values when requesting a token:

SOAPAction: <http://docs.oasis-open.org/ws-sx/ws-trust/200512/RST/Issue>
Content-Type: text/xml;charset=utf-8

3.3 Nemlogin STS signing certificates

STS signs the response messages. The certificates used to validate the signature can be found on the testportal site.

Integration test certificate

[IntegrationTestSigning.cer]

Production certificate

[ProductionSigning.cer]

4 Test data

This section describes the available test data and documents a test call with response for each of the three usage scenarios. It is not possible to run the test calls directly against the sts test service as they will have expired time instant values.

4.1 WSP test certificate

In integration test a test web service provider WSP has been configured with the entityid <https://saml.nnit001.dmz.inttest>. This entity can be used as the test WSP if you do not create one for your system using the Nemlogin administration site.

The response assertion for the WSP entity <https://saml.nnit001.dmz.inttest> is encrypted with the public key of the DanID Voces testcertificate. Included in this document is a link to the certificate including the private key which can be used for decrypting the response for that WSP.

[DanIDVocesGyldig.p12]

4.2 WSP test endpoint

Integration test also has an "ECHO" identity based web service, which can be called with the token issued by STS. The web service simply echoes the request.

Connection to the echo web service is only allowed via SSL.

URL to the STS "ECHO" web service in integration test environment:

<https://securetokenwsp.test-nemlog-in.dk/SecurityTokenServiceMessageEcho.svc>

4.3 Bootstrap token scenario

In this scenario your service is configured to receive urn:liberty:disco:2006-08:DiscoveryEPR attributes from NemLogin when a user login. The value of this attribute is used to request an identity token for the test WSP <https://saml.nnit001.dmz.inttest> in the below example request against sts.

Request and response messages are described in detail in [STS-RULES].

4.3.1 Request example

Note that the content of the `wst14:ActAs` can be sent Base64 encoded as it is received from the NemLogin assertion, but for purpose of this example is decoded. STS accepts both formats for the content of the ActAs element

```
POST https://securetokenservice.nemlog-in.dk/SecurityTokenService.svc HTTP/1.1
SOAPAction: http://docs.oasis-open.org/ws-sx/ws-trust/200512/RST/Issue
Content-Type: text/xml; charset=utf-8
Host: securetokenservice.nemlog-in.dk
Content-Length: [length]
```

```
<S11:Envelope xmlns:S11="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:wsa="http://www.w3.org/2005/08/addressing"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:wss="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd"
  xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd" xmlns:ds="http://www.w3.org/2000/09/xmldsig#" xmlns:wst="http://docs.oasis-open.org/ws-sx/ws-trust/200512" xmlns:wst14="http://docs.oasis-open.org/ws-sx/ws-trust/200802" xmlns:saml2="urn:oasis:names:tc:SAML:2.0:assertion"
  xmlns:wsp="http://schemas.xmlsoap.org/ws/2002/12/policy">
  <S11:Header>
    <wsa:Action wsu:Id="action">http://docs.oasis-open.org/ws-sx/ws-trust/200512/RST/Issue</wsa:Action>
    <wsa:MessageID wsu:Id="msgid">uuid:b3f7fda3-047e-4ecc-80ee-7cf2a15e2b28</wsa:MessageID>
    <wsa:To wsu:Id="to">Error! Hyperlink reference not valid.>
    <wsse:Security mustUnderstand="1">
      <wsu:Timestamp wsu:Id="sec-ts">
        <wsu:Created>2014-03-19T15:42:08Z</wsu:Created>
        <wsu:Expires>2014-03-29T15:42:08Z</wsu:Expires>
      </wsu:Timestamp>
      <wsse:BinarySecurityToken wsu:Id="sec-binsectoken" ValueType="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-x509-token-profile-1.0#X509v3"
        EncodingType="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-soap-message-security-1.0#Base64Binary">MIIGJTCCBQ2gAwIBAgIETBGQPTANBgkqhkiG9w0BAQsFADBIMQswCQYDVQQGEwJESZES
        MBAGA1UECgwJVJFJVU1QyNDA4MSUwIwYDVQQDDbXU1VTVDI0MdgguU3lzdGVtdGVzdCBWSU1JIENBMB4XDTEzMT
        AwODEwMzA1OVoXDTEmMjAwODEwMjZNVowgZQxwCzAJBgNVBAYTAkRLMSowKAYDVQQKDCHDmGtVbm9taXN0eXJl
        bHNlb2VhbnVlYDVL1I6MTA5MTYyMTYwMzEwMTAgBgNVBAUTGUNUjoxMDIxMzIzMS1GSUQ6MTA5NTA3MjEwNQYDVQDDC
        7DmGtVbm9taXN0eXJlbnNlb2VhbnVlYDVL1I6MTA5MTYwMzEwMTAgBgNVBAUTGUNUjoxMDIxMzIzMS1GSUQ6MTA5NTA3MjEwNQYDVQDDC
        AAOCAQ8AMIIBCgKCAQEajA9FNMAZxS62VXKL2CbVQIEIP4aBEJzH5mbIJ500JCX/BQnTjqwB58nfrn46kywpA2
        iD0twmaF5J5T7v1xryN+uhvuP4B5G2E/Ydirb4fM71pw0Ur0bXByYd2jbtRUMAAQxParXQNvuo9M8TgVpvGTAS
        dCvN8H0zHwrBAGj4P+Eh194rZaD1T1np75cQLEcbHqer55Fg542N1jNe8X7E6a1pRfbsI1eK7YtJDMj5pXhSr
        Ko8G1vCPH0urkJoVngiUVD6PnPH+eq4FkfIdTx931YvagTDeDAkk0qWixU4a859StEjgU16e5hTDQG9srpM5Y6
        RK55ACG8njw72o1V7wIDAQABo4ICyDCCAsQwDgYDVR0PAAQH/BAQDAgO4MIGUBggrBgEFBQcBAQSBhzCBhDA7Bg
        grBgEFBQcCwAYYYvaHR0cDovL29jc3Auc3lzdGVtdGVzdDgudHJ1c3QyNDA4LmNvbS9yZXNwb25kZXIwRQYIKwYB
        BQUHMAKG0wH0dHA6Ly9mLmFpYS5zeXN0ZW10ZXN0OC50cnVzdDI0MdgguY29tL3N5c3R1bXRlc3Q4LWNhbnVlYDVL1I6MTA5MTYyMTYwMzEwMTAgBgNVBAUTGUNUjoxMDIxMzIzMS1GSUQ6MTA5NTA3MjEwNQYDVQDDC
        cASAGA1UdIASCARcwggETMIIBDwYKNkwyBBAGB9FECBAYEAjCB/TAvBggrBgEFBQcCARYjaHR0cDovL3d3dy50
        cnVzdDI0MdgguY29tL3JlY29zaXRvcnkWgckGCCsGAQUFBwICMIG8MAwWBURhbk1EMAMCAQEagatEYw5JRCB0ZX
        N0IGN1cnRpZm1rYXRlc1BmcmEgZGVubmUgQ0EgdWRzdGVkZXMGdW5kZXIgaT01EIDeUmy42LjEuNC4xLjMxMzEz
        LjIuNC42LjQuMi4gRGFuSUQgdGVzdCBjZXJ0aWZpY2F0ZXMGZnJvbSB0aG1zIENBIFgyZSBpc3N1ZWQgdW5kZX
```

Comment [A1]: Bootstrap scenario

```
IgT0lEIDEuMy42LjEuNC4xLjMxMzEzLjIuNC42LjQuMi4wgasGA1UdHwSBozCBoDA6oDigNoY0aHR0cDovL2Ny
bC5zeXN0ZW10ZXN0C50cnVzdDI0MdgUy29tL3N5c3R1bXRlc3Q4LmNybDBioGCgXqRcMFOxCzAJBgNVBAYTAK
RLMRIwEAYDVQQKDAU1U1VTVDI0MDgxJTAjBgNVBAMMHFRSVVNUMjQwOCBTeXN0ZW10ZXN0IFZJSUkgQ0ExEDAO
BgNVBAMMB0NSTDE2MzZmHwYDVR0jBBgwFoAU1hs2EzsiKcI9+ef5k+vGyz4SXwQHqYDVR0BBYEFE66Ft1BtS
J7FwAC61IOWhrLnXLYMAKGA1UdEwQCMAAwDQYJKoZIhvcNAQELBQADggEBAEVQAp1vuJR5nPDpHy0D52KspmF4
yDkbmixPzh/eroSwqBnUFONPMAIz70/+NogwGxPy4H6odM1RwEoHwy67cVcejKMdaNT69JEFxqe+ZQZzj70B+V
rtsMnSAPFJrgopukHoCjHEmOR2/sSoPgY6N2MUFM15KC0zHiNMWFIUMBuhawEP3kMSTUe85XSXU8yMZv50zjG
0Kdtu/pudb2jYLYLwB/RREk1qa9WuHvBGNzw/ZHZMZFnUsormbFEI7+0jFDsMqBEad+Mtu5IpVLd1VWnLJF6L
It1bXmUihVhjuZcPho8AsQpw1vOYifNyOfvNHEUK6x18P+Ky0WkcA12U8=</wsse:BinarySecurityToken>
```

Comment [A2]: Certificate used to sign the request

```
<Signature xmlns="http://www.w3.org/2000/09/xmldsig#">
  <SignedInfo>
    <CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"
  />

    <SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldsig#rsa-sha1" />
    <Reference URI="#action">
      <Transforms>
        <Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
      </Transforms>
      <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
      <DigestValue>3cXAh1hZH22NiSh7AttXKxBap7Q=</DigestValue>
    </Reference>
    <Reference URI="#msgid">
      <Transforms>
        <Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
      </Transforms>
      <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
      <DigestValue>pWQAcXZ9y9iVwFqQ0o8bXWx647E=</DigestValue>
    </Reference>
    <Reference URI="#to">
      <Transforms>
        <Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
      </Transforms>
      <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
      <DigestValue>NpjeF+QxtVh1evyCgU75tqu5MrI=</DigestValue>
    </Reference>
    <Reference URI="#sec-ts">
      <Transforms>
        <Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
      </Transforms>
      <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
      <DigestValue>3yFxAneUrxFF/8EnUCSkGtt17Y=</DigestValue>
    </Reference>
    <Reference URI="#sec-binsectoken">
      <Transforms>
        <Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
      </Transforms>
      <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
      <DigestValue>ee1qFWDiXfdE9X6J1PD8sjfCJec=</DigestValue>
    </Reference>
    <Reference URI="#body">
      <Transforms>
        <Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
      </Transforms>
      <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
      <DigestValue>7Duk89GNbUPkGVPgzuO+V2eTrwk=</DigestValue>
    </Reference>
  </SignedInfo>
```

```
<SignatureValue>EmKP1LT8PIEM8eIPP0k3YnB0qvTJGQp/mA6bQ0BXDSWq3uihvTniLF56WL17chJafJsiJC
J43untS5JHRJCCugyJQ3KuuqfVu0+WwLih053/f+901BQmBK1JGZ038kR0hlwISjTyeyckTD0j0hUWFxzY+nQD
1/qQYZmxAhR0lNpgJXZswoEg9DhEBZOpFT8woQPOY83SNQvY14p1EbqQz01ntRf0zp0f1yW9qntNatnYuWE1hp
jwoSRnzaQTWYbe9Qawz4vT071rkeBFXkpXefXni9apdN043n1MLh7chZj1y1/s1B7v/fUFVY1WfJoAcFY5XSyD
JfGn+mSNpPiGUQ==</SignatureValue>
  <KeyInfo>
    <o:SecurityTokenReference xmlns:o="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd">
      <o:Reference URI="#sec-binsectoken" />
    </o:SecurityTokenReference>
  </KeyInfo>
</Signature>
</wsse:Security>
</S11:Header>
<S11:Body wsu:Id="body">
  <wst:RequestSecurityToken Context="urn:uuid:fa8babae-74ad-4971-94f1-9840f7cb97cc">
    <wst:RequestType>http://docs.oasis-open.org/ws-sx/ws-
trust/200512/Issue</wst:RequestType>
    <wst14:ActAs>
      <saml2:Assertion ID="af0de510-8a7f-49b3-a3d4-f31c698f9537" IssueInstant="2014-
03-19T15:42:08.8Z" Version="2.0">
        <saml2:Issuer>Error! Hyperlink reference not valid.</saml2:Issuer>
        <Signature xmlns="http://www.w3.org/2000/09/xmldsig#">
          <SignedInfo>
            <CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-
c14n#" />
            <SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldsig#rsa-sha1"
/>
            <Reference URI="#af0de510-8a7f-49b3-a3d4-f31c698f9537">
              <Transforms>
                <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-
signature" />
              </Transforms>
              <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
              <DigestValue>pyeNIAABDsFpEkxHzX3+4kn/f3U=</DigestValue>
            </Reference>
          </SignedInfo>
        </Signature>
      </saml2:Assertion>
    </wst14:ActAs>
    <saml2:Subject>
      <saml2:NameID Format="urn:oasis:names:tc:SAML:1.1:nameid-
format:X509SubjectName">C=DK,O=Økonomistyrelsen // CVR:10213231,CN=Morten
Mortensen,Serial=CVR:10213231-RID:93947552</saml2:NameID>
      <saml2:SubjectConfirmation Method="urn:oasis:names:tc:SAML:2.0:cm:holder-
of-key">
        <saml2:SubjectConfirmationData
xsi:type="saml2:KeyInfoConfirmationDataType">
          <ds:KeyInfo>
            <ds:X509Data>
              <ds:X509Certificate>MIIGJTCCBQ2gAwIBAgIETBGQPTANBgqhkiG9w0BAQsFADBIMQswCQYDVQQGEwJESZ
ESMBAGA1UECgwJVJVVU1QyNDA4MSUwIwYDVQQDDbXUU1VTVDI0MdgGU31zdGVtdGVzdCBWSU1JIENBMB4XDTEz
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```

Comment [A3]: Subject that
logged into Nemlogin

```
MTAwODEwMzA1OV0xXDE2MTAwODEwMjkzNVowgZQxXzA1BjBjNVBAYTAkRLMSowKAYDVQKQDCHdMgtvbm9taXN0eX
J1bHN1biAvLyBDVlI6MTAyMTMyMzExWTA9BjBjNVBAYTAkRLMSowKAYDVQKQDCHdMgtvbm9taXN0eX
DC7DmGtvm9taXN0eXJ1bHN1biBGT0NFUzEgKz1bmt0aw9uc2N1cnRpZm1rYXQpMIIBIjANBgkqhkiG9w0BAQ
EFAAOCAQ8AMIIBCgKCAQEAAj9FNMAzXs62VXKL2CbVQiEIP4aBEJzH5mbIJ500JCX/BQnTjQwB58nfrn46kywp
A2iD0twwaF5J5T7v1xryN+uhvuP4B5G2E/Ydirb4fM71pw0Ur0bXByYd2jbtRUMAAQxParXQNvuo9M8TgVpVGT
ASdCvN8H0zHwrBAGj4P+Eh194rZaD1T1np75cQLEccBHQer55Fg542N1jNe8X7E6a1pRfbsI1eK7YtJDMj5pXh
SrKo8G1vCPH0urkJoVNGiUVD6PnPH+eq4FkfDtx931YvagTDeDAkk0qWixU4a859StEjgU16e5hTDQG9srpM5
Y6RK55ACG8njw2o1v7WIDAQAB04ICyDCCAsQwDgYDVR0PAAQ/BAQDAg04MIGUBggrBgEFBQcBAQSBhZCBhDA7
BggrBgEFBQcwAYYvaHR0cDovL29jc3Auc3lzdGVtdGVzdDgudHJ1c3QyNDA4LmNvbS9yZXNwb25kZkZlIwRQYIKw
YBBQUHMAKG0wH0dHA6Ly9mLmFpY5S5zeXN0ZW10ZXN0OC50cnVzdDI0MDguY29tL3N5c3RlbXRlc3Q4LWNhLmN1
cjCCASAGA1UdIASCARcwggETMIBDwYNKwYBBAGB9FECBAYEAjCB/TAvBggrBgEFBQcCARYjaHR0cDovL3d3dy
50cnVzdDI0MDguY29tL3J1cG9zaXRvcnkkgwckGCCsGAQUFBwICMIG8MAwWBURhbk1EMAMCAQEAgatEYw5JRCB0
ZXN0IGNlcnRpZm1rYXRlc1BmcmEgZGVubmUgQ0EgdWRzdGVkZXMgdW5kZXIgt01EIDEuMy42LjEuNC4xLjMxMz
EzLjIuNC42LjQ0Mi4gRGFUSUQgdGVzdCBjZXJ0awZpY2F0ZXMGZnJvbSB0aG1zIENBIEFyZSBpc3N1ZWQgdW5k
ZXIgt01EIDEuMy42LjEuNC4xLjMxMzEzLjIuNC42LjQ0Mi4gWGA1UdHwSBozCB0DA6oDigNoY0aHR0cDovL2
NybC5zeXN0ZW10ZXN0OC50cnVzdDI0MDguY29tL3N5c3RlbXRlc3Q4LmNybDBioGCgXqRcMFoxCzA1BjBjNVBAYT
AkRLMRIwEAYDVQKQDA1U1VTVDI0MDgXJTAjBjBjNVBAMMHFRSVVNUMjQwOCBTeXN0ZW10ZXN0IFZJSUkqQ0ExED
A0BgNVBAMMB0N0STDE2MzZmMwHwYDVR0jBBgwFoAUIhs2EzsiKCI9+ef5k+vGyz4SxwQwHQYDVR00BBYEF66Ft1B
tSJ7FwAC61IOWhrLnxLyMAkGA1UdEwQMAAwDQYJKOZIhvcNAQELBQADggEBAEVAp1vujR5nPDpHy0D52Kspm
F4yDkbmixPzh/eroSwqBnUFONPMIAiz70/+NogwGxPy4H6odM1RwEoHwy67cVCejKMdaNT69JEFxqe+ZQZzj70B
+VrtsMnSAPFJrgopukHoCjHEmOR2/sSoPgY6N2MUFM15KC0zHiNMWFUIMbuhawEP3kMSTUe85XSQU8yMzv50z
jG0Kdtu/pudb2jYLYLwB/RREk1qa9wWuHvBGNzw/ZHZMZFNUormbFEI7+0jFDsMqBEad+Mtu5IpVLd1VWnLJF
6Lit1bXmUihVhjuZcPho8AsQpw1v0YifNyOfvNHEUK6x18P+KyOWkcA12U8=
```

ds:X509Certificate

ds:X509Data

ds:KeyInfo

saml2:SubjectConfirmationData

saml2:SubjectConfirmation

saml2:Subject

saml2:Conditions **NotBefore="2014-03-19T15:42:08.8Z"** **NotOnOrAfter="2014-03-19T23:42:08.8Z"**

saml2:AudienceRestriction

saml2:Audience **Error! Hyperlink reference not valid.**

saml2:AudienceRestriction

saml2:Conditions

saml2:AttributeStatement

saml2:Attribute **NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:basic"** **Name="dk: urname :saml:attribute:IdPSessionIndex"**

saml2:AttributeValue **xsi:type="xs:string">58-31-13-5C-12-02-45-D0-57-35-33-3E-B9-D9-D7-8D-FE-70-D4-27**

saml2:Attribute

saml2:Attribute **NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:basic"** **Name="dk: urname :saml:attribute:SpEntityId"**

saml2:AttributeValue **xsi:type="xs:string">Error! Hyperlink reference not valid.**

saml2:Attribute

saml2:AttributeStatement

saml2:Assertion

wst14:ActAs

wsp:AppliesTo

wsa:EndpointReference

wsa:Address **Error! Hyperlink reference not valid.**

wsa:EndpointReference

wsp:AppliesTo

wst:RequestSecurityToken

S11:Body

S11:Envelope

Comment [A4]: Base64 decoded bootstrap token issued by Nemlogin. Can be sent encoded as received by Nemlogin and is only decoded here to illustrate contents

Comment [A5]: Entityid of the WSP to get an identity token for

4.3.2 Response envelope example (decrypted)

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <S11:Envelope xmlns:wsa="http://www.w3.org/2005/08/addressing"
xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-
1.0.xsd" xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-secext-1.0.xsd" xmlns:S11="http://schemas.xmlsoap.org/soap/envelope/">
      <S11:Header>
        <wsa:Action wsu:Id="action">http://docs.oasis-open.org/ws-sx/ws-
trust/200512/RST/Issue</wsa:Action>
        <wsa:MessageID wsu:Id="messageid">uuid:4233013c-a5c2-4f76-8d01-
d1bb05748a20</wsa:MessageID>
        <wsa:To wsu:Id="relatesto">uuid:7116fb59-9999-49c5-8812-3454d1e6da88</wsa:To>
        <wsse:Security mustUnderstand="1">
          <wsu:Timestamp wsu:Id="sec_timestamp">
            <wsu:Created>2014-03-19T15:53:35.677Z</wsu:Created>
            <wsu:Expires>2014-03-19T23:53:35.677Z</wsu:Expires>
          </wsu:Timestamp>
          <Signature xmlns="http://www.w3.org/2000/09/xmldsig#">
            <SignedInfo>
              <CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-
c14n#" />
              <SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldsig#rsa-sha1"
/>
              <Reference URI="#action">
                <Transforms>
                  <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-
signature" />
                </Transforms>
                <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
                <DigestValue>1hj8fpM7T5rcOsNRPpnxA3p3AkM=</DigestValue>
              </Reference>
              <Reference URI="#messageid">
                <Transforms>
                  <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-
signature" />
                </Transforms>
                <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
                <DigestValue>rpWy0Yec6gj9AOHIyXstM3rtRRU=</DigestValue>
              </Reference>
              <Reference URI="#relatesto">
                <Transforms>
                  <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-
signature" />
                </Transforms>
                <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
                <DigestValue>z+qW7tLlhRcQYX3devjrfDwkue8=</DigestValue>
              </Reference>
              <Reference URI="#sec_timestamp">
                <Transforms>
                  <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-
signature" />
                </Transforms>
                <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
                <DigestValue>SpavL5iUpQ8+PJS2kdZLoDjcgYQ=</DigestValue>
              </Reference>
            </SignedInfo>
            <SignatureValue>
              <Reference URI="#body">
```

```

        <Transforms>
          <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-
signature" />
        </Transforms>
        <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
        <DigestValue>8lkSqhIg9u+uGg+U1N1077c5pBY=</DigestValue>
        </Reference>
      </SignedInfo>

<SignatureValue>nzpn01rLpv5cV8fAx2dWWhRp4v5KNxq/gkoYh64+D93cf1Fpd/VUPuELUQF8W1x7AMaFrT
fC+xHEhQnevLWYbu391Y+MWGNB0gaVK7PzsVwnXnO9UV8okqDRgPfgDPRSGLlmvxUWsn3aXfx4TeujY/sJOqU
ObK1HpDXI+/Kis3hSIQkZFq4a9ussnRxEy3wuxTOfnxXPT6CFnj4B51D1H0vcRE6gT50ATr0SyxFyJKVnuQCWf
ckir4I4CX+rZ47QNVc045URD497sTteolSargio1LqBabCrF/lkNCvJ545phVr45NIY+IPLgLpue08EXSMJtnk
4IEUQo0K9Ch6Fw==</SignatureValue>
    </Signature>
  </wsse:Security>
</S11:Header>
<S11:Body wsu:Id="body">
  <RequestSecurityTokenResponseCollection xmlns="http://docs.oasis-open.org/ws-
sx/ws-trust/200512">
    <RequestSecurityTokenResponse Context="urn:uuid:ab217ef6-2a61-4081-83ae-
f0f7788017a6">
      <TokenType />
      <AppliesTo xmlns="http://schemas.xmlsoap.org/ws/2002/12/policy">
        <EndpointReference xmlns="http://www.w3.org/2005/08/addressing">
          <Address>Error! Hyperlink reference not valid.</Address>
        </EndpointReference>
      </AppliesTo>
      <RequestedSecurityToken>
        <Assertion ID="_8e8ed6cb-0fd7-41a3-b6f3-478e0b4a1c76"
IssueInstant="2014-03-19T15:53:35.677Z" Version="2.0"
xmlns="urn:oasis:names:tc:SAML:2.0:assertion">
          <Issuer Format="urn:oasis:names:tc:SAML:2.0:nameid-
format:entity">Error! Hyperlink reference not valid.</Issuer>
          <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
            <ds:SignedInfo>
              <ds:CanonicalizationMethod
Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
              <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-
more#rsa-sha256" />
              <ds:Reference URI="#_8e8ed6cb-0fd7-41a3-b6f3-478e0b4a1c76">
                <ds:Transforms>
                  <ds:Transform
Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature" />
                  <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-
c14n#" />
                </ds:Transforms>
                <ds:DigestMethod
Algorithm="http://www.w3.org/2001/04/xmldsig#sha256" />
                <ds:DigestValue>YgzcHkR4WqvjiJ6V1k1lU+yd6/nxIZhkMVk/aM3G4CE=</ds:DigestValue>
              </ds:Reference>
            </ds:SignedInfo>
          </ds:Signature>
        </Assertion>
      </RequestedSecurityToken>
    </RequestSecurityTokenResponse>
  </RequestSecurityTokenResponseCollection>
</S11:Body>
</wsse:Security>
</S11:Header>
</S11:Header>

```

Comment [A6]: EntityId of the WSP this identity token is valid for


```
<KeyInfo xmlns="http://www.w3.org/2000/09/xmldsig#">
  <X509Data>
```

Comment [A7]: Certificate used to sign the message. Do not verify signature with embedded certificates.

Comment [A8]: Since the WSP uses persistent identifiers the subject name has been translated

[illegible]

```
jIuNC42LjQuMi4gRGfUSUQgdGVzdCBjZXJ0awZpY2F0ZXMGZnJvbSB0aGlzIENBIGFyZSBpc3N1ZWQgdW5kZXI
gT01EIDEuMy42LjEuNC4xLjMxMzEzLjIuNC42LjQuMi4wgasGA1UdHwSBozCBODA6oDigNoY0aHR0cDovL2Ny
C5zeXN0ZW10ZXN0C50cnVzdI0MDguY29tL3N5c3R1bXR1c3Q4LmNybDBioGCgXqRcMFoxCzAJBgNVBAYTAkR
LMRIWEAYDVQQKDAU1U1VTVDI0MDGxJTAjBgNVBAMMHFRSVVNUMjQwOCBTeXN0ZW10ZXN0IFZJSUkgQ0ExEDA0B
gNVBAMMB0NSTDE2MzMwHwYDVROjBBgwFoAU1hs2EzsiKcI9+ef5k+vGyz4SXwQwHQYDVR00BBYEF66Ft1BtSJ
7FwAC61IOWhrLnXLYMAKGA1UdEwQCAAwDQYJKoZIhvcNAQELBQADggEBAEVQAp1vuJR5nPDpHy0D52KspmF4y
DkbmixPzh/eroSwqBnUFONPMAIz70/+NogwGxPy4H6odM1RwEoHwy67cVCejKMdaNT69JEFxqe+ZQZzj70B+Vr
tsMnSAPFJrgopukHoCjHEmOR2/sSoPgY6N2MUFM15KC0zhINMWFUIMbuhawEP3kMSTUe85XSQU8yMZv50zjG0
Kdtu/pudb2jYLYLwB/RREk1qa9wWuHvBGNzw/ZHZMZFnUsormbFEI7+0jFDsMqBEad+Mtu5IpVLd1VWnLJF6LI
t1bXmUihVhjuZcPho8AsQpw1v0YifNyOfvNHEUK6x18P+Ky0WkcA12U8=</X509Certificate>
</X509Data>
</KeyInfo>
</SubjectConfirmationData>
</SubjectConfirmation>
</Subject>
<Conditions NotBefore="2014-03-19T15:53:35.677Z" NotOnOrAfter="2014-
03-19T23:53:35.677Z">
  <AudienceRestriction>
    <Audience>Error! Hyperlink reference not valid.</Audience>
  </AudienceRestriction>
</Conditions>
<AttributeStatement>
  <Attribute Name="dk:gov:saml:attribute:SpecVer"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:basic" FriendlyName="SpecVer">
    <AttributeValue>DK-SAML-2.0</AttributeValue>
  </Attribute>
  <Attribute Name="dk:gov:saml:attribute:AssuranceLevel"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:basic"
FriendlyName="AssuranceLevel">
    <AttributeValue>2.0</AttributeValue>
  </Attribute>
  <Attribute Name="urn:oid:2.5.29.29"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:basic"
FriendlyName="Certificate issuer attribute">
    <AttributeValue>CN=TRUST2408 Systemtest VIII CA, O=TRUST2408,
C=DK</AttributeValue>
  </Attribute>
  <Attribute Name="dk:gov:saml:attribute:IsYouthCert"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:basic"
FriendlyName="IsYouthCert">
    <AttributeValue a:nil="true"
xmlns:a="http://www.w3.org/2001/XMLSchema-instance" />
  </Attribute>
  <Attribute Name="urn:liberty:disco:2006-08:DiscoveryEPR"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:basic">
    <AttributeValue a:nil="true"
xmlns:a="http://www.w3.org/2001/XMLSchema-instance" />
  </Attribute>
  <Attribute Name="urn:oid:2.5.4.65"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:basic" FriendlyName="OCES
Pseudonym">
    <AttributeValue a:nil="true"
xmlns:a="http://www.w3.org/2001/XMLSchema-instance" />
  </Attribute>
</AttributeStatement>
</Assertion>
</RequestedSecurityToken>
<Lifetime>
```

Comment [A9]: Certificate used to sign the requestmessage as SubjectConfirmation has been set to holder-of-key

Comment [A10]: Asserted attributes


```

    <Created xmlns="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd">2014-03-19T15:53:35.677Z</Created>
    <Expires xmlns="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd">2014-03-19T23:53:35.677Z</Expires>
    </Lifetime>
  </RequestSecurityTokenResponse>
</RequestSecurityTokenResponseCollection>
</S11:Body>
</S11:Envelope>
</s:Body>
</s:Envelope>

```

4.4 Local token scenario

In this scenario the user identity is proofed by a bootstrap token that is obtained from WSC's local STS hosted by the WSC organization itself.

Request and response messages are described in detail in [STS-RULES].

4.4.1 Request example

In the request example below <https://sts.wsc1.dkdev> is used as an issuer to create the message and <https://saml.nnit001.dmz.inttest> as the WSP to issue an identity token for. The issuer must be created specifically for your organization should you need to test this scenario.

POST <https://securetokenservice.nemlog-in.dk/SecurityTokenService.svc> HTTP/1.1
 SOAPAction: <http://docs.oasis-open.org/ws-sx/ws-trust/200512/RST/Issue>
 Content-Type: text/xml; charset=utf-8
 Host: securetokenservice.nemlog-in.dk
 Content-Length: [length]

```

<S11:Envelope xmlns:S11="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:wsa="http://www.w3.org/2005/08/addressing"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:wss="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd"
xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-
1.0.xsd" xmlns:ds="http://www.w3.org/2000/09/xmldsig#" xmlns:wst="http://docs.oasis-
open.org/ws-sx/ws-trust/200512" xmlns:wst14="http://docs.oasis-open.org/ws-sx/ws-
trust/200802" xmlns:saml2="urn:oasis:names:tc:SAML:2.0:assertion"
xmlns:wsp="http://schemas.xmlsoap.org/ws/2002/12/policy">
  <S11:Header>
    <wsa:Action wsu:Id="action">http://docs.oasis-open.org/ws-sx/ws-
trust/200512/RST/Issue</wsa:Action>
    <wsa:MessageID wsu:Id="msgid">uuid:bfd8c8de-ddf6-44e4-b89d-
de467b380d83</wsa:MessageID>
    <wsa:To wsu:Id="to">Error! Hyperlink reference not valid.>
    <wss:Security mustUnderstand="1">
      <wsu:Timestamp wsu:Id="sec-ts">

```

Comment [A11]: Local token scenario

```
<wsu:Created>2014-03-19T16:08:01Z</wsu:Created>
<wsu:Expires>2014-03-29T16:08:01Z</wsu:Expires>
</wsu:Timestamp>
<wsse:BinarySecurityToken wsu:Id="sec-binsectoken" ValueType="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-x509-token-profile-1.0#X509v3"
EncodingType="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-soap-message-security-1.0#Base64Binary">MIIE3TCCBEAgAwIBAgIEQDhRhtANBgkqhkiG9w0BAQUFADA/MQswCQYDVQQGEwJESzEMMAoGA1UEChMDVERDMSIwIAYDVQQDExLUREMgT0NFUyBTeXN0ZW10ZXN0IENBIE1JMB4XDTEzMTM1MV
oXDE1MDExNTE1NDM1MVowZjZlXzA3BGNVBAITAKRLMSwHwYDVQQKEWh0TklUIEEvUyAvLyBDVlI6MjEwOTMx
MDYyYDA1BgNVBAUTHkNUNWjoyMTA5MzEwNi1GSUQ6MTM1ODI2MzY0OTk3NDA3BgNVBAMUMNhrb25vbWlzdHlyZW
xzZW4u3U13ldGVtIDUxIChmdW5r6dG1vbNjJXZj0aWZpa2F0KTCBnzANBgkqhkiG9w0BAQEFAAOBjQAwgYkCgYEA
uVq1GdHBSzynydpLe2fDvibnFaSq/1CEDoaynJqfbguBaiXkkDJk09EjmfXh9UgdUj1dx8IM5t5Fpidf1zUX1FN
iDVAQpoMeDAS25VhthVUzD7GSL8YdKk6Yio+9r3tjSkOdsroXELYPHsJXUBpD2XDrr52h2m2m3LwhQyMS8C
AwEAAACAPAwgKKMA4G1UdDWEB/wQEAwIDuDarBgNVHRAEJDAigA8yMDEzMDExNTE1MTM1MVqBDzIwMTUwMT
E1MTU0MzUxwJBGBggrBgEFBQcBAQQ6MDgwNgYIKwYBBQUHMAAGGKmh0dHA6Ly90ZXN0Lm9jc3AuY2VydG1maWth
dC5kay9vY3NwL3N0YXR1c2CAQMGAlUdIASB+ZCB+DCB9QYJKQEBAQEBAQEDM1HnMC8GCCsGAQUFBwIBFiNodH
RwOi8vd3d3LmNlcnRpZmlyYXQuZGZscmVwb3NpdG9yeTCBswYIKwYBBQUHAgIwgaYwChYDVERDMAMCAQEagZdu
REMgVGvzdCBDZXJ0aWZpa2F0ZXIgzNjhhIGRlbn5lIENBIHVkc3RlZGVzIHVuzGVyIE9JRCAxLjEuMS4xLjEuMS
4xLjEuMS4zLjEuBUREMgVGvzdCBDZXJ0aWZpa2F0ZXMGZnJvbSB0aGlzIENBIFgyZS8pc3N1ZWQgdW5kZXIgt0IE
IDEuMS4xLjEuMS4xLjEuMS4xLjEuMIGXBGNVHR8EgY8wgYwwV6BVoF0kUTBPMQswCQYDVQQGEwJESzEMMAoGA1
UEChMDVERDMSIwIAYDVQQDExLUREMgT0NFUyBTeXN0ZW10ZXN0IENBIE1JMB4XDTEzMTM1MVqBDzIwMTUwMT
E1MTU0MzUxwJBGBggrBgEFBQcBAQQ6MDgwNgYIKwYBBQUHMAAGGKmh0dHA6Ly90ZXN0Lm9jc3AuY2VydG1maWth
dC5kay9vY3NwL3N0YXR1c2CAQMGAlUdIASB+ZCB+DCB9QYJKQEBAQEBAQEDM1HnMC8GCCsGAQUFBwIBFiNodH
RwOi8vd3d3LmNlcnRpZmlyYXQuZGZscmVwb3NpdG9yeTCBswYIKwYBBQUHAgIwgaYwChYDVERDMAMCAQEagZdu
REMgVGvzdCBDZXJ0aWZpa2F0ZXIgzNjhhIGRlbn5lIENBIHVkc3RlZGVzIHVuzGVyIE9JRCAxLjEuMS4xLjEuMS
4xLjEuMS4zLjEuBUREMgVGvzdCBDZXJ0aWZpa2F0ZXMGZnJvbSB0aGlzIENBIFgyZS8pc3N1ZWQgdW5kZXIgt0IE
IDEuMS4xLjEuMS4xLjEuMS4xLjEuMIGXBGNVHR8EgY8wgYwwV6BVoF0kUTBPMQswCQYDVQQGEwJESzEMMAoGA1
UEChMDVERDMSIwIAYDVQQDExLUREMgT0NFUyBTeXN0ZW10ZXN0IENBIE1JMB4XDTEzMTM1MVqBDzIwMTUwMT
E1MTU0MzUxwJBGBggrBgEFBQcBAQQ6MDgwNgYIKwYBBQUHMAAGGKmh0dHA6Ly90ZXN0Lm9jc3AuY2VydG1maWth
dC5kay9vY3NwL3N0YXR1c2CAQMGAlUdIASB+ZCB+DCB9QYJKQEBAQEBAQEDM1HnMC8GCCsGAQUFBwIBFiNodH
RwOi8vd3d3LmNlcnRpZmlyYXQuZGZscmVwb3NpdG9yeTCBswYIKwYBBQUHAgIwgaYwChYDVERDMAMCAQEagZdu
REMgVGvzdCBDZXJ0aWZpa2F0ZXIgzNjhhIGRlbn5lIENBIHVkc3RlZGVzIHVuzGVyIE9JRCAxLjEuMS4xLjEuMS
4xLjEuMS4zLjEuBUREMgVGvzdCBDZXJ0aWZpa2F0ZXMGZnJvbSB0aGlzIENBIFgyZS8pc3N1ZWQgdW5kZXIgt0IE
IDEuMS4xLjEuMS4xLjEuMS4xLjEuMIGXBGNVHR8EgY8wgYwwV6BVoF0kUTBPMQswCQYDVQQGEwJESzEMMAoGA1
UEChMDVERDMSIwIAYDVQQDExLUREMgT0NFUyBTeXN0ZW10ZXN0IENBIE1JMB4XDTEzMTM1MVqBDzIwMTUwMT
E1MTU0MzUxwJBGBggrBgEFBQcBAQQ6MDgwNgYIKwYBBQUHMAAGGKmh0dHA6Ly90ZXN0Lm9jc3AuY2VydG1maWth
dC5kay9vY3NwL3N0YXR1c2CAQMGAlUdIASB+ZCB+DCB9QYJKQEBAQEBAQEDM1HnMC8GCCsGAQUFBwIBFiNodH
RwOi8vd3d3LmNlcnRpZmlyYXQuZGZscmVwb3NpdG9yeTCBswYIKwYBBQUHAgIwgaYwChYDVERDMAMCAQEagZdu
REMgVGvzdCBDZXJ0aWZpa2F0ZXIgzNjhhIGRlbn5lIENBIHVkc3RlZGVzIHVuzGVyIE9JRCAxLjEuMS4xLjEuMS
4xLjEuMS4zLjEuBUREMgVGvzdCBDZXJ0aWZpa2F0ZXMGZnJvbSB0aGlzIENBIFgyZS8pc3N1ZWQgdW5kZXIgt0IE
IDEuMS4xLjEuMS4xLjEuMS4xLjEuMIGXBGNVHR8EgY8wgYwwV6BVoF0kUTBPMQswCQYDVQQGEwJESzEMMAoGA1
UEChMDVERDMSIwIAYDVQQDExLUREMgT0NFUyBTeXN0ZW10ZXN0IENBIE1JMB4XDTEzMTM1MVqBDzIwMTUwMT
E1MTU0MzUxwJBGBggrBgEFBQcBAQQ6MDgwNgYIKwYBBQUHMAAGGKmh0dHA6Ly90ZXN0Lm9jc3AuY2VydG1maWth
dC5kay9vY3NwL3N0YXR1c2CAQMGAlUdIASB+ZCB+DCB9QYJKQEBAQEBAQEDM1HnMC8GCCsGAQUFBwIBFiNodH
RwOi8vd3d3LmNlcnRpZmlyYXQuZGZscmVwb3NpdG9yeTCBswYIKwYBBQUHAgIwgaYwChYDVERDMAMCAQEagZdu
REMgVGvzdCBDZXJ0aWZpa2F0ZXIgzNjhhIGRlbn5lIENBIHVkc3RlZGVzIHVuzGVyIE9JRCAxLjEuMS4xLjEuMS
4xLjEuMS4zLjEuBUREMgVGvzdCBDZXJ0aWZpa2F0ZXMGZnJvbSB0aGlzIENBIFgyZS8pc3N1ZWQgdW5kZXIgt0IE
IDEuMS4xLjEuMS4xLjEuMS4xLjEuMIGXBGNVHR8EgY8wgYwwV6BVoF0kUTBPMQswCQYDVQQGEwJESzEMMAoGA1
UEChMDVERDMSIwIAYDVQQDExLUREMgT0NFUyBTeXN0ZW10ZXN0IENBIE1JMB4XDTEzMTM1MVqBDzIwMTUwMT
E1MTU0MzUxwJBGBggrBgEFBQcBAQQ6MDgwNgYIKwYBBQUHMAAGGKmh0dHA6Ly90ZXN0Lm9jc3AuY2VydG1maWth
dC5kay9vY3NwL3N0YXR1c2CAQMGAlUdIASB+ZCB+DCB9QYJKQEBAQEBAQEDM1HnMC8GCCsGAQUFBwIBFiNodH
RwOi8vd3d3LmNlcnRpZmlyYXQuZGZscmVwb3NpdG9yeTCBswYIKwYBBQUHAgIwgaYwChYDVERDMAMCAQEagZdu
REMgVGvzdCBDZXJ0aWZpa2F0ZXIgzNjhhIGRlbn5lIENBIHVkc3RlZGVzIHVuzGVyIE9JRCAxLjEuMS4xLjEuMS
4xLjEuMS4zLjEuBUREMgVGvzdCBDZXJ0aWZpa2F0ZXMGZnJvbSB0aGlzIENBIFgyZS8pc3N1ZWQgdW5kZXIgt0IE
IDEuMS4xLjEuMS4xLjEuMS4xLjEuMIGXBGNVHR8EgY8wgYwwV6BVoF0kUTBPMQswCQYDVQQGEwJESzEMMAoGA1
UEChMDVERDMSIwIAYDVQQDExLUREMgT0NFUyBTeXN0ZW10ZXN0IENBIE1JMB4XDTEzMTM1MVqBDzIwMTUwMT
E1MTU0MzUxwJBGBggrBgEFBQcBAQQ6MDgwNgYIKwYBBQUHMAAGGKmh0dHA6Ly90ZXN0Lm9jc3AuY2VydG1maWth
dC5kay9vY3NwL3N0YXR1c2CAQMGAlUdIASB+ZCB+DCB9QYJKQEBAQEBAQEDM1HnMC8GCCsGAQUFBwIBFiNodH
RwOi8vd3d3LmNlcnRpZmlyYXQuZGZscmVwb3NpdG9yeTCBswYIKwYBBQUHAgIwgaYwChYDVERDMAMCAQEagZdu
REMgVGvzdCBDZXJ0aWZpa2F0ZXIgzNjhhIGRlbn5lIENBIHVkc3RlZGVzIHVuzGVyIE9JRCAxLjEuMS4xLjEuMS
4xLjEuMS4zLjEuBUREMgVGvzdCBDZXJ0aWZpa2F0ZXMGZnJvbSB0aGlzIENBIFgyZS8pc3N1ZWQgdW5kZXIgt0IE
IDEuMS4xLjEuMS4xLjEuMS4xLjEuMIGXBGNVHR8EgY8wgYwwV6BVoF0kUTBPMQswCQYDVQQGEwJESzEMMAoGA1
UEChMDVERDMSIwIAYDVQQDExLUREMgT0NFUyBTeXN0ZW10ZXN0IENBIE1JMB4XDTEzMTM1MVqBDzIwMTUwMT
E1MTU0MzUxwJBGBggrBgEFBQcBAQQ6MDgwNgYIKwYBBQUHMAAGGKmh0dHA6Ly90ZXN0Lm9jc3AuY2VydG1maWth
dC5kay9vY3NwL3N0YXR1c2CAQMGAlUdIASB+ZCB+DCB9QYJKQEBAQEBAQEDM1HnMC8GCCsGAQUFBwIBFiNodH
RwOi8vd3d3LmNlcnRpZmlyYXQuZGZscmVwb3NpdG9yeTCBswYIKwYBBQUHAgIwgaYwChYDVERDMAMCAQEagZdu
REMgVGvzdCBDZXJ0aWZpa2F0ZXIgzNjhhIGRlbn5lIENBIHVkc3RlZGVzIHVuzGVyIE9JRCAxLjEuMS4xLjEuMS
4xLjEuMS4zLjEuBUREMgVGvzdCBDZXJ0aWZpa2F0ZXMGZnJvbSB0aGlzIENBIFgyZS8pc3N1ZWQgdW5kZXIgt0IE
IDEuMS4xLjEuMS4xLjEuMS4xLjEuMIGXBGNVHR8EgY8wgYwwV6BVoF0kUTBPMQswCQYDVQQGEwJESzEMMAoGA1
UEChMDVERDMSIwIAYDVQQDExLUREMgT0NFUyBTeXN0ZW10ZX
```

Comment [A12]: Certificate used to sign the request

```
<DigestValue>8cVtRKb+50s69UoKS3kjWZ7D1o=</DigestValue>
</Reference>
<Reference URI="#sec-binsectoken">
  <Transforms>
    <Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
  </Transforms>
  <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
  <DigestValue>e5x501qT2vNlrU0xzBoxop27eMc=</DigestValue>
</Reference>
<Reference URI="#body">
  <Transforms>
    <Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
  </Transforms>
  <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
  <DigestValue>9rHHTL23Lvy/aKnJcW74ECRaTw=</DigestValue>
</Reference>
</SignedInfo>

<SignatureValue>Xic/OuZOFrykaGHBXq5Y1RcursUE+jRI5PM/nQ/Ec5gKDKQUk2pww2mexArQtIR/7by7ar
u2WoHkT+x6c40SjDUPhK1Fmy9PGcP5xYM76Hs+ipgc/KrG9BumU14r+jKcz074KfUvnzs3v1H+Ryxwe43FpaFs
/ez4PTOPuWUQITM=</SignatureValue>
  <KeyInfo>
    <o:SecurityTokenReference xmlns:o="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd">
      <o:Reference URI="#sec-binsectoken" />
    </o:SecurityTokenReference>
  </KeyInfo>
</Signature>
</wsse:Security>
</S11:Header>
<S11:Body wsu:Id="body">
  <wst:RequestSecurityToken Context="urn:uuid:2e6ae0af-de22-4256-a417-30f2e659de22">
    <wst:RequestType>http://docs.oasis-open.org/ws-sx/ws-
trust/200512/Issue</wst:RequestType>
    <wst14:ActAs>
      <saml2:Assertion ID="_db1e4ff1-66be-445e-a45b-f10de717430b"
IssueInstant="2014-03-19T16:08:01.6Z" Version="2.0">
        <saml2:Issuer>Error! Hyperlink reference not valid.</saml2:Issuer>
        <Signature xmlns="http://www.w3.org/2000/09/xmldsig#">
          <SignedInfo>
            <CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-
c14n#" />
            <SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldsig#rsa-sha1"
/>
            <Reference URI="#_db1e4ff1-66be-445e-a45b-f10de717430b">
              <Transforms>
                <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-
signature" />
              </Transforms>
              <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
              <DigestValue>Om3kP8fKr5/gJqOV3IgEnQZ4G9I=</DigestValue>
            </Reference>
          </SignedInfo>

          <SignatureValue>W/2eNTMW8gb2J3DkgBQtInRV4BvvYh+o/cFBdh6dg83sRYDg1foBIiR4aIQZX8SkehGFLS
h5kLucv3Z+zxX4j1Z3PVQyJFRhd0r97QWffXES+trP70Y0LLzLsx+49q47f+NmLHUG5+wt7gH4Vu4LXIF/Sain
Y5QxPW1Lfs+mNpY=</SignatureValue>
        </Signature>
```

Comment [A13]: EntityId of the bootstrap token issuer

Comment [A14]: Subjectname to issue identity token for

Comment [A15]: Certificate used to sign the request message since SubjectConfirmation is set to holder-of-key

```

    <wsa:EndpointReference>
      <wsa:Address>Error! Hyperlink reference not valid.>
    </wsa:EndpointReference>
  </wsp:AppliesTo>
</wst:RequestSecurityToken>
</S11:Body>
</S11:Envelope>

```

Comment [A16]: Entityid of the WSP to issue identity token for

4.4.2 Response envelope example (decrypted)

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <S11:Envelope xmlns:wsa="http://www.w3.org/2005/08/addressing"
      xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-
      1.0.xsd" xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
      wssecurity-secext-1.0.xsd" xmlns:S11="http://schemas.xmlsoap.org/soap/envelope/">
      <S11:Header>
        <wsa:Action wsu:Id="action">http://docs.oasis-open.org/ws-sx/ws-
        trust/200512/RST/Issue</wsa:Action>
        <wsa:MessageID wsu:Id="messageid">uuid:cf6a69ae-20c3-40fc-beb4-
        b4b274c39a84</wsa:MessageID>
        <wsa:To wsu:Id="relatesto">uuid:bfd8c8de-ddf6-44e4-b89d-de467b380d83</wsa:To>
        <wsse:Security mustUnderstand="1">
          <wsu:Timestamp wsu:Id="sec_timestamp">
            <wsu:Created>2014-03-19T16:08:07.562Z</wsu:Created>
            <wsu:Expires>2014-03-20T00:08:07.562Z</wsu:Expires>
          </wsu:Timestamp>
          <Signature xmlns="http://www.w3.org/2000/09/xmldsig#">
            <SignedInfo>
              <CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-
              c14n#" />
              <SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldsig#rsa-sha1"
              />
              <Reference URI="#action">
                <Transforms>
                  <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-
                  signature" />
                </Transforms>
                <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
                <DigestValue>1hj8fpM7T5rcOsNRPPnxA3p3AkM=</DigestValue>
              </Reference>
              <Reference URI="#messageid">
                <Transforms>
                  <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-
                  signature" />
                </Transforms>
                <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
                <DigestValue>M1Uyo3CixVdha1FCCKAua4DgMUs=</DigestValue>
              </Reference>
              <Reference URI="#relatesto">
                <Transforms>
                  <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-
                  signature" />
                </Transforms>
                <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />

```

```

        <DigestValue>33utWz1UPTxPqPR+C2Z1FvQcVlE=</DigestValue>
    </Reference>
    <Reference URI="#sec_timestamp">
        <Transforms>
            <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-
signature" />
        </Transforms>
        <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
        <DigestValue>oG1qch310TXYT81GFR0QDWUmdDQ=</DigestValue>
    </Reference>
    <Reference URI="#body">
        <Transforms>
            <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-
signature" />
        </Transforms>
        <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
        <DigestValue>Sb0GCThFJH84H5K0/ihmjizH+hA=</DigestValue>
    </Reference>
</SignedInfo>

<SignatureValue>VtF8HjHx1QqoUuB5fUwTf0h8y4D9h8d7dEFESgE78mivxPf+GNbsgMz+RD4YM9MJ6r6doO
DFqHOKKCJ702DDUp/oIKm0arcmf1kC4bvKoCEj97vApFUsnxY+ZPBF0hOH10gbW3WyyvFQuyzU7ToRTLQispS/J
PLG4Cs/EFZAFZ0MKrs7h9i0v8oTuJ2PuhEJMYbqKHUeaWh3N0ZGmd0sEv4TqiMXmsvKzgQ5g1kwxYvb6o+WCb
kFkGfneH0+M/VCCQLczYwylTEqh7AW3q6egAiQreD06KoUHHwkH4ngG5o0Pa7HyBsk6cmnAdJhSZUzPjXbYts
boXn9ojS0r/iXw==</SignatureValue>
</Signature>
</wsse:Security>
</S11:Header>
<S11:Body wsu:Id="body">
    <RequestSecurityTokenResponseCollection xmlns="http://docs.oasis-open.org/ws-
sx/ws-trust/200512">
        <RequestSecurityTokenResponse Context="urn:uuid:2e6ae0af-de22-4256-a417-
30f2e659de22">
            <TokenType />
            <AppliesTo xmlns="http://schemas.xmlsoap.org/ws/2002/12/policy">
                <EndpointReference xmlns="http://www.w3.org/2005/08/addressing">
                    <Address>Error! Hyperlink reference not valid.</Address>
                </EndpointReference>
            </AppliesTo>
            <RequestedSecurityToken>
                <Assertion ID="_d9e47a96-01b4-4a44-9f98-338f19180ad2"
IssueInstant="2014-03-19T16:08:07.562Z" Version="2.0"
xmlns="urn:oasis:names:tc:SAML:2.0:assertion">
                    <Issuer Format="urn:oasis:names:tc:SAML:2.0:nameid-
format:entity">Error! Hyperlink reference not valid.</Issuer>
                    <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
                        <ds:SignedInfo>
                            <ds:CanonicalizationMethod
Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
                            <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-
more#rsa-sha256" />
                            <ds:Reference URI="#_d9e47a96-01b4-4a44-9f98-338f19180ad2">
                                <ds:Transforms>
                                    <ds:Transform
Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature" />
                                    <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-
c14n#" />
                                </ds:Transforms>

```

Comment [A17]: Entityid of the WSP this identitytoken is issued for

Comment [A18]: Certificate used to sign the response. Do not verify signature with embedded certificates.

Comment [A19]: Certificate used to sign the request message since SubjectConfirmation is set to holder-of-key

Comment [A20]: Asserted attributes


```

    <Lifetime>
      <Created xmlns="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd">2014-03-19T16:08:07.562Z</Created>
      <Expires xmlns="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd">2014-03-20T00:08:07.562Z</Expires>
    </Lifetime>
  </RequestSecurityTokenResponse>
</RequestSecurityTokenResponseCollection>
</S11:Body>
</S11:Envelope>
</s:Body>
</s:Envelope>

```

4.5 Signature scenario

In this scenario the user identity is proofed by the user signing the request to Nemlog-in STS. The scenario contains no bootstrap tokens.

Request and response messages are described in detail in [STS-RULES].

4.5.1 Request example

POST <https://securetokenservice.nemlog-in.dk/SecurityTokenService.svc> HTTP/1.1
 SOAPAction: <http://docs.oasis-open.org/ws-sx/ws-trust/200512/RST/Issue>
 Content-Type: text/xml;charset=utf-8
 Host: securetokenservice.nemlog-in.dk
 Content-Length: [length]

```

<S11:Envelope xmlns:S11="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:wsa="http://www.w3.org/2005/08/addressing"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:wsse="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd"
xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-
1.0.xsd" xmlns:ds="http://www.w3.org/2000/09/xmldsig#" xmlns:wst="http://docs.oasis-
open.org/ws-sx/ws-trust/200512" xmlns:wst14="http://docs.oasis-open.org/ws-sx/ws-
trust/200802" xmlns:saml2="urn:oasis:names:tc:SAML:2.0:assertion"
xmlns:wsp="http://schemas.xmlsoap.org/ws/2002/12/policy">
  <S11:Header>
    <wsa:Action wsu:Id="action">http://docs.oasis-open.org/ws-sx/ws-
trust/200512/RST/Issue</wsa:Action>
    <wsa:MessageID wsu:Id="msgid">uuid:843e7250-bd66-43c1-a033-
1fcbf171fb79</wsa:MessageID>
    <wsa:To wsu:Id="to">Error! Hyperlink reference not valid.>
    <wsse:Security mustUnderstand="1">
      <wsu:Timestamp wsu:Id="sec-ts">
        <wsu:Created>2014-03-19T16:30:54Z</wsu:Created>
        <wsu:Expires>2014-03-29T16:30:54Z</wsu:Expires>
      </wsu:Timestamp>

```

Comment [A21]: Signature
scenario

```
<wsse:BinarySecurityToken wsu:Id="" sec-binsectoken" ValueType="" ValueText="" http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-x509-token-profile-1.0#X509v3" EncodingType="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-soap-message-security-1.0#Base64Binary">MIIGIDCCBQigAwIBAgIETAV1TzANBgkqhkiG9w0BAQsFADBMQSwCQYDVQQGEWJESzESMBAGA1UECgwJVJFUU1QyNDA4MSUwIwYDVQQDBXUULVVDIOMdggU3lzdGVtZGVzdCBWSU1JIENBMB4XDTEyMDExMjE0MTMxMTowZDgqJELMAKGA1UEBhMCRESxKjAoBgNVBAAwICoYA29ub21pc3R5c3R5cyZzh1aBK4th2YaIibRyZF503GXhWs+XR3JLORVMGkxERYGD4fTnNFwu7TpYaTO8pnXEx2+bV2ohIzcyaVQYW21KMgcplpsWr6ww5IufOYkhdyv90oqJRouBh4oHJwvBJVJQLDwOL+d6bj/Djw+tHWtuWMyPUKRZrjqf6dWIA45pklH8mcFNztXGI0ZHvlqH7IiPhC73KKqxmgivvdUCUVI15MADEscQQ8ds0Aw7uFjiytROF/5wd0jJOZHJTtoBlvtQd8UshEtL6TsiEchi2ZVPf/tJmIRriQNNHQy/SWEPlnkt2HzxrKuPNzt1GeMVBAgMBAAGjggLiMiIC3jaOBGNVHQ8Baf8EBAMCA/gwgZQCccSGAQUFBwEBBIghMIGEMDSGCCSGAQUFBzABhi9odHRwoi8vb2Nzc5zeXNOZW10ZXN0OC50cnVudDAlciBPSUQGMS4zljYuMS40ljEuMzEmTMuMi40LjYuMi41LiBEYw5JRCB0ZXNOIGNlcnRpZmljYXRlc3Bmcm9tIHROaXMqQ0EgYXJ1IGlzc3VlZCB1bmRlciBPSUQGMS4zljYuMS40LjEuMzEmTMuMi40LjYuMi41LjAYBgNVHREETAPGq1QzWxmQGSuaXQuY29tMIGrBgNVHR8EgaMwgaAwOQA4odaGNGh0dHA6Ly9jcWwuc3lzdGVtZGVzdDgudHJ1c3QyNDAdALmNvbS9zeXN0ZW10ZXN0OC5jcmmwYqBgoF6kXDBAmQswCQYDVQQGEWJESzESMBAGA1UECgwJVJFUU1QyNDA4MSUwIwYDVQQDBXUULVVDIOMdggU3lzdGVtZGVzdCBWSU1JIENBMRAdgYDVQQDDADDUkwMTIOMB8GA1UdIwQYMBAAFiYbNmM7IinCPfn+ZPrxs+E18EMB0GA1UddGQWBbtv7aqGa8L1qrstR8ITb9LzORT/zAJBgNVHRMEAJAAMA0GCsGSIb3DQEBCwUA4IBAQAOPd04cFsEKozgug3x+GBFoYZdgYBZR/dSJexU3N9+e5wTgwterCYkk3BTv4VLB16NFUJP9TPqOzaCkqtDwlXruy0WNKVMMNGacVZ3hS91baTW3ZnNIhaE5x5GdxvsjrVCxZvyAhT7jkp4J62haMoDt+pRsZoDCVcNOKuLWL+Lh5efaB9vSCMsYKUjXF9A/F21nhBiNsECsWjnXyt2/igbtUYCST12dtCPhs+sDEAnaZ1TJa2B/CMUPo15niLVFuOWCPPyxurUZfB3bk/9qdHT60JvaVeZWAAMCWYEWF7CW4AAGKDPMdG1qsRxFGaoB83bd5zCbn3kW/SHng8/lc</wsse:BinarySecurityToken>
```

```
<Signature xmlns="http://www.w3.org/2000/09/xmldsig#">  
  <SignedInfo>  
    <CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />  
  
    <SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldsig#rsa-sha1" />  
    <Reference URI="#action">  
      <Transforms>  
        <Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />  
      </Transforms>  
      <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />  
      <DigestValue>3cXAhlhZH22NiSh7AttXkBap7Q=</DigestValue>  
    </Reference>  
    <Reference URI="#msgid">  
      <Transforms>  
        <Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />  
      </Transforms>  
      <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />  
      <DigestValue>NvtEuEG8pjzRFQYeOuaSeSlhls=</DigestValue>  
    </Reference>  
    <Reference URI="#to">  
      <Transforms>  
        <Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />  
      </Transforms>  
      <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />  
      <DigestValue>ss1+nV/baeyPJ/37viSjsyXRLzo=</DigestValue>  
    </Reference>  
    <Reference URI="#sec-ts">  
      <Transforms>  
        <Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
```

Comment [A22]: Moces certificate used to sign the message

```

    </Transforms>
    <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
    <DigestValue>DW99i1Ee95p41xJYtQ7zi71kdJo=</DigestValue>
  </Reference>
  <Reference URI="#sec-binsectoken">
    <Transforms>
      <Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
    </Transforms>
    <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
    <DigestValue>zBUY+nRlcI7i2tPGuMdySQ+61RQ=</DigestValue>
  </Reference>
  <Reference URI="#body">
    <Transforms>
      <Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
    </Transforms>
    <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
    <DigestValue>yAdTWdcsjfKpfrLV0ASy6ns9ZnY=</DigestValue>
  </Reference>
</SignedInfo>

<SignatureValue>0LzuJ8QqwpY0o2AW5k8088jGtP9ENJck2NC+rVJGyRF/sVyGI78kIQbpABUEkoh17eEuTd
ouEmY0EEUjD61RoDXY2HKWTRiR566SekJqco+p1e5NWxgqoFMW90vaf7z40zfrTvRzh94GSPzHWjAQT3Dy77ui
+L1b2ESXLic4c8tDWHRFbmX1Afd3iL9YLbysObGDNvnWBv0qOHI3t+WoihtIbo/T3ui0mxk8FgGepza8Trvo6P
gKsYmxcDxNpNdMrWirC4h4XhSinZb1Bi7twQYdiwR1YhjWmxHkeYh1k4xEvP6HQ0cUGc8fVSSVf0qVYNB1Rcx
MfGbGDf+cSvDZQ==</SignatureValue>
  <KeyInfo>
    <o:SecurityTokenReference xmlns:o="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd">
      <o:Reference URI="#sec-binsectoken" />
    </o:SecurityTokenReference>
  </KeyInfo>
</Signature>
</wsse:Security>
</S11:Header>
<S11:Body wsu:Id="body">
  <wst:RequestSecurityToken Context="urn:uuid:8592b8cc-8403-4fcd-bbdc-2edef7233ea">
    <wst:RequestType>http://docs.oasis-open.org/ws-sx/ws-
trust/200512/Issue</wst:RequestType>
    <wsp:AppliesTo>
      <wsa:EndpointReference>
        <wsa:Address>Error! Hyperlink reference not valid.>
      </wsa:EndpointReference>
    </wsp:AppliesTo>
  </wst:RequestSecurityToken>
</S11:Body>
</S11:Envelope>

```

Comment [A23]: EntityId to issue identity token for

4.5.2 Response envelope example (decrypted)

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <S11:Envelope xmlns:wsa="http://www.w3.org/2005/08/addressing"
xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-
1.0.xsd" xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-secext-1.0.xsd" xmlns:S11="http://schemas.xmlsoap.org/soap/envelope/">

```

```

<S11:Header>
  <wsa:Action wsu:Id="action">http://docs.oasis-open.org/ws-sx/ws-
trust/200512/RST/Issue</wsa:Action>
  <wsa:MessageID wsu:Id="messageid">uuid:387df9d7-9cd4-4dce-9631-
4a454382ccc2</wsa:MessageID>
  <wsa:To wsu:Id="relatesto">uuid:843e7250-bd66-43c1-a033-1fcbf171fb79</wsa:To>
  <wsse:Security mustUnderstand="1">
    <wsu:Timestamp wsu:Id="sec_timestamp">
      <wsu:Created>2014-03-19T16:31:16.530Z</wsu:Created>
      <wsu:Expires>2014-03-20T00:31:16.530Z</wsu:Expires>
    </wsu:Timestamp>
    <Signature xmlns="http://www.w3.org/2000/09/xmldsig#">
      <SignedInfo>
        <CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-
c14n#" />
        <SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldsig#rsa-sha1"
/>
        <Reference URI="#action">
          <Transforms>
            <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-
signature" />
          </Transforms>
          <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
          <DigestValue>1hj8fpM7T5rc0sNRPpnxA3p3AkM=</DigestValue>
        </Reference>
        <Reference URI="#messageid">
          <Transforms>
            <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-
signature" />
          </Transforms>
          <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
          <DigestValue>feXCr0A4kTVaJymWshnvJ5ojgY=</DigestValue>
        </Reference>
        <Reference URI="#relatesto">
          <Transforms>
            <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-
signature" />
          </Transforms>
          <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
          <DigestValue>TdErp5Ev8aUIm+N9uLyOBmzy0NA=</DigestValue>
        </Reference>
        <Reference URI="#sec_timestamp">
          <Transforms>
            <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-
signature" />
          </Transforms>
          <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
          <DigestValue>Exf1NzNZ8HjiIWBufFQI2YXVto4=</DigestValue>
        </Reference>
        <Reference URI="#body">
          <Transforms>
            <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-
signature" />
          </Transforms>
          <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
          <DigestValue>JhZNRBfxT1gCLZH0dFNUTLf7a+I=</DigestValue>
        </Reference>
      </SignedInfo>
    </Signature>
  </wsse:Security>

```

```
<SignatureValue>lPj1z5i3/BTMgM+NyUs2g7A6HckfY9estZrUFVT5fcB7L2tbhg5KafUu7fDaR0kxRVmXn
3YLqCiEEQcVrfdbMYBsBqpM1vWFn8uCH8ViHc/gFCAzFuJJ8HnrEbUtJI7dCpP48UDJPMpQaxlKV6mgsfXAQ1
YmLTsGCqTA2/BtfrnkhuJUbm8I7xfHe6QianEDMu994XqQLUV+SMT38/xnTX/MHICVweY2KwFT7phtSVwGqkV9c
IEWKDZUhHzLL0dFV2N6ziQ5m8tY4S9mtvXgtHMBkj3JF1J/kxA982PpjVu9Czc1bk0eDN42by0YS+70J/uJ61
bPHA4CfndgoZvw==</SignatureValue>
</Signature>
</wsse:Security>
</S11:Header>
<S11:Body wsu:Id="body">
  <RequestSecurityTokenResponseCollection xmlns="http://docs.oasis-open.org/ws-
sx/ws-trust/200512">
    <RequestSecurityTokenResponse Context="urn:uuid:8592b8cc-8403-4fcd-bbdc-
2edefff7233ea">
      <TokenType />
      <AppliesTo xmlns="http://schemas.xmlsoap.org/ws/2002/12/policy">
        <EndpointReference xmlns="http://www.w3.org/2005/08/addressing">
          <Address>Error! Hyperlink reference not valid.</Address>
        </EndpointReference>
      </AppliesTo>
      <RequestedSecurityToken>
        <Assertion ID="_f93c8d3e-a0ff-4ad9-b796-f6a0d5582442"
IssueInstant="2014-03-19T16:31:16.530Z" Version="2.0"
xmlns="urn:oasis:names:tc:SAML:2.0:assertion">
          <Issuer Format="urn:oasis:names:tc:SAML:2.0:nameid-
format:entity">Error! Hyperlink reference not valid.</Issuer>
          <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
            <ds:SignedInfo>
              <ds:CanonicalizationMethod
Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
              <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-
more#rsa-sha256" />
              <ds:Reference URI="#_f93c8d3e-a0ff-4ad9-b796-f6a0d5582442">
                <ds:Transforms>
                  <ds:Transform
Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature" />
                  <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-
c14n#" />
                </ds:Transforms>
                <ds:DigestMethod
Algorithm="http://www.w3.org/2001/04/xmlenc#sha256" />
              </ds:Reference>
            </ds:SignedInfo>
            <ds:SignatureValue>FY1qcmJjbdGsdfs/xKkLA3FxTkUN4/Jxs53H72dVpSW9Cx0oYem9VtFzlh7uLhRGf18
+Ok31eJBKJannjkxfQtIjK4SepnGnPyjkw7fsYZBCBFh7UwM0wdyQPq1t0YPMDz+mpSua5LqeoBY1nIK0Q4n3
ofyRVrb4LejMV24m92jWCX+Jmvyo0sORL+2eQFU2orb7uJyQUd/XyBeBD52tbbXJL4Svj2SQU2nvsv6Rf71K2Ufn
YI+DfdvXKJzctx72GQ+2pUfiIrnjdmx74IbHcFh1zIkT5cVD/BCwQwp4fLbhOo3Ou0Wahf5J8Z1kvfpYaJ50iJ
4dtBPtUGL2esQ8i2A==</ds:SignatureValue>
          <KeyInfo xmlns="http://www.w3.org/2000/09/xmldsig#">
            <X509Data>
              <X509Certificate>MIIGFTCCBBP2gAwIBAgIETBI9xjANBgkqhkiG9w0BAQAQSwADBgIMQswCQYDVQQGEWJESzESM
BAGA1UECGwJVVFJU1QyNDA4MSUwIiwYDVQDDDBBUU1VTVDI0MdgguU3lzdGVtdGVzdCBWSU1JIENBMb4XDTE0MDE
zMDEwMjkzN1oXDTE3MDEzMDEwMjgyM1owgYQxCzAJBgNVBAYTAkRLMSEwHwYDVQQKDBhOTklUIEEEvUyAvLyBDV
lI6MjEwOTMxMDYxUiAlBgNVBAUTHNWUioyMTA5MzEwNi1GSU06MTMzNjQ0NzAzA5MjUwNzApBgNVBAMMIktGT0

```

Comment [A24]: Entityid of the WSP this identity token is issued for

Comment [A25]: Certificate used to sign the response. Do not verify signature with embedded certificates.

Comment [A26]: Subjectname extracted from the certificate used to sign the request

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Author: AXPE

Approved by: ID: 32309

```
</Attribute>
<Attribute Name="dk:gov:saml:attribute:IsYouthCert"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:basic"
FriendlyName="IsYouthCert">
  <AttributeValue a:nil="true"
xmlns:a="http://www.w3.org/2001/XMLSchema-instance" />
</Attribute>
<Attribute Name="dk:gov:saml:attribute:PidNumberIdentifier"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:basic"
FriendlyName="PidNumberIdentifier">
  <AttributeValue a:nil="true"
xmlns:a="http://www.w3.org/2001/XMLSchema-instance" />
</Attribute>
<Attribute Name="urn:oid:2.5.4.10"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:basic"
FriendlyName="organizationName">
  <AttributeValue>Økonomistyrrelsen // CVR:10213231</AttributeValue>
</Attribute>
<Attribute Name="dk:gov:saml:attribute:ProductionUnitIdentifier"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:basic"
FriendlyName="ProductionUnitIdentifier">
  <AttributeValue>1003388503</AttributeValue>
</Attribute>
<Attribute Name="dk:gov:saml:attribute:UserAdministratorIndicator"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:basic"
FriendlyName="UserAdministratorIndicator">
  <AttributeValue>0</AttributeValue>
</Attribute>
<Attribute Name="dk:gov:saml:attribute:SENumberIdentifier"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:basic"
FriendlyName="SENumberIdentifier">
  <AttributeValue>66662222</AttributeValue>
</Attribute>
<Attribute Name="dk:gov:saml:attribute:CvrNumberIdentifier"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:basic"
FriendlyName="CVRnumberIdentifier">
  <AttributeValue>10213231</AttributeValue>
</Attribute>
<Attribute Name="dk:gov:saml:attribute:RidNumberIdentifier"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:basic"
FriendlyName="RidNumberIdentifier">
  <AttributeValue>93947552</AttributeValue>
</Attribute>
<Attribute Name="urn:oid:2.5.4.65"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:basic" FriendlyName="OCES
Pseudonym">
  <AttributeValue a:nil="true"
xmlns:a="http://www.w3.org/2001/XMLSchema-instance" />
</Attribute>
</AttributeStatement>
</Assertion>
</RequestedSecurityToken>
<Lifetime>
  <Created xmlns="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd">2014-03-19T16:31:16.53Z</Created>
  <Expires xmlns="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd">2014-03-20T00:31:16.53Z</Expires>
</Lifetime>
```

Comment [A27]: Issued attributes


```
        </RequestSecurityTokenResponse>  
      </RequestSecurityTokenResponseCollection>  
    </S11:Body>  
  </S11:Envelope>  
</s:Body>  
</s:Envelope>
```

5 Reference

Reference	Description
[STS-RULES]	Security Token Service DS – Processing rules https://test-nemlog-in.dk/Testportal/dokumenter/NemLog-in2%20-%20STS-Processing%20rules.pdf
[CSS – USERMANUAL]	CSS User manual http://digitaliser.dk/resource/2561041
[DanIDVocesGyldig.p12]	DanId Voces test certificate used for the test WSP https://test-nemlog-in.dk/Testportal/certifikater/DanIDVocesGyldig.p12
[IntegrationTestSigning.cer]	Integration test signing certificate https://test-nemlog-in.dk/Testportal/certifikater/IntegrationTestSigning.zip
[ProductionSigning.cer]	Production signing certificate https://test-nemlog-in.dk/Testportal/certifikater/ProductionSigning.zip
[OIOIDWS]	OIO Identity-based Web Services v1.0.1a http://digitaliser.dk/resource/526486
[SOAP11]	Simple Object Access Protocol (SOAP) 1.1 http://www.w3.org/TR/2000/NOTE-SOAP-20000508/

6 Change log

Date	Version	Description of Changes	Initials
2014-03-19	0.1	Document created	AxPe
2014-04-02	0.2	Document updated	AxPe
2014-04-03	1.0	Approved by DIGST	AxPe
2014-04-22	1.1	Added reference to "ECHO" test service	AxPe
2014-10-30	1.2	Section "3.2 Binding" updated to include SOAP version. Request examples updated with http headers	TMLN