

MTA X-tee teenus **downloadMime.v1**  
Tehniline kirjeldus  
Version 1.1

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## 1 Sissejuhatus

Käesolev dokument kirjeldab MTA X-tee teenuse downloadMime.v1 tehnilisi aspekte. Teenusega saavad X-tee kliendid alla laadida MTA rakenduste poolt saadetud manuseid.

### 1.1 Mõisted ja lühendid

Nimetus	Kirjeldus
MIME	Multipurpose Internet Mail Extensions (multipart/related) [1]
MTA	Maksu- ja Tolliamet
SOAPATT	SOAP Messages with Attachments [2]
X-tee	Eesti asutuste ja organisatsioonide vaheline infosüsteemide andmevahetuskiht [3]
X-tee sõnumi protokoll	X-Road: Message Protocol v4.0 [4]

## 1.2 Viited

- 1: MIME, <https://tools.ietf.org/html/rfc2387>
- 2: SOAPATT, <https://www.w3.org/TR/SOAP-attachments>
- 3: X-tee üldine, <https://www.ria.ee/ee/x-tee.html>
- 4: X-tee sõnumi protokoll, [X-road message protocol](#)

## 2 X-tee sõnumid

SOAP ja MIME sõnumid koostatakse vastavalt X-tee sõnumi protokollile [4].

### 2.1 Päring

Päring on SOAP formaadis.

#### 2.1.1 SOAP päis

X-tee päise service struktuur koosneb järgmistest elementidest:

- xRoadInstance – EE
- memberClass – GOV
- memberCode – 70000349
- subsystemCode – mkriiides

- serviceCode – downloadMime
- serviceVersion – v1

X-tee päise subsystem struktuur koosneb järgmistest elementidest:

- xRoadInstance – EE
- memberClass – GOV
- memberCode – 70000349
- subsystemCode – misp-client

## 2.1.2 SOAP keha

Keha koosneb järgmistest elementidest (downloadMime/request):

- target – MTA rakenduse kood (“KMD2”). Kohustuslik.
- id – sõnumi ID. ID väärtus saadakse abiteenusega. Mittekohustuslik.

### 2.1.2.1 Abiteenus WAITING\_LIST

Abiteenusega WAITING\_LIST saab X-tee klient teada temale saadetud ootel sõnumite arvu.

Päring:

```
<mta:downloadMime xmlns:mta="http://emta-v6.x-road.eu">  
  <request>  
    <target>WAITING_LIST</target>  
  </request>  
</mta:downloadMime>
```

Vastus:

```
<mta:downloadMimeResponse xmlns:mta="http://emta-v6.x-road.eu">  
  <request>  
    <target>WAITING_LIST</target>  
  </request>  
  <response>  
    <props>  
      <prop key="KMD2">1144</prop>  
      <prop key="KMD2">1145</prop>  
    </props>  
  </response>  
</mta:downloadMimeResponse>
```

### 2.1.2.2 Abiteenus WAITING\_LIST\_IDS

Abiteenusega WAITING\_LIST\_IDS saab X-tee klient teada temale saadetud ootel sõnumite ID väärtused. Sõnumit saab korduvalt alla laadida teades selle ID-id.

Päring:

```
<mta:downloadMime xmlns:mta="http://emta-v6.x-road.eu">
  <request>
    <target>WAITING_LIST_IDS</target>
  </request>
</mta:downloadMime>
```

Vastus:

```
<mta:downloadMimeResponse xmlns:mta="http://emta-v6.x-road.eu">
  <request>
    <target>WAITING_LIST_IDS</target>
  </request>
  <response>
    <props>
      <prop key="KMD2">123456788</prop>
      <prop key="KMD2">123456789</prop>
      <prop key="KMD2">123456790</prop>
      <prop key="KMD2">123456791</prop>
      <prop key="KMD2">123456792</prop>
    </props>
  </response>
</mta:downloadMimeResponse>
```

## 2.2 Vastus

Vastus on kas SOAP või MIME multipart/related formaadis. WS-I [swaRef](#) ning [MTOM/XOP](#) ei ole toetatud.

### 2.2.1 SOAP vastus

Kui ootel sõnumid puuduvad, siis tagastatakse järgmine SOAP vastus:

```
<mta:downloadMimeResponse xmlns:mta="http://emta-v6.x-road.eu">
  <request>
    <target>KMD2</target>
  </request>
  <response>
    <faultCode>NOT_FOUND</faultCode>
    <faultString>Ootel sõnumeid ei leitud</faultString>
  </response>
</mta:downloadMimeResponse>
```

Kui ootel sõnum ID alusel puudub, siis tagastatakse järgmine SOAP vastus:

```
<mta:downloadMimeResponse xmlns:mta="http://emta-v6.x-road.eu">
  <request>
    <target>KMD2</target>
    <id>666</id>
  </request>
  <response>
    <faultCode>NOT_FOUND</faultCode>
    <faultString>Sõnumit ei leitud</faultString>
  </response>
</mta:downloadMimeResponse>
```

## 2.2.2 MIME vastus

MIME multipart/related vastus koosneb ühest SOAP sõnumist ning ühest manusest. MIME sõnum koostatakse vastavalt X-tee sõnumi [protokollile](#) [4].

Vastuse SOAP kehas on järgmised elemendid (downloadMimeResponse/response):

- file – elemendi atribuut href viitab manuse Content-Id väärtusele. Sisuks on manuse SHA-512 räsi.
- props/prop[unbounded] – lisainfo edastatava manuse kohta. Järgmised parameetrid lisatakse alati: ID – sõnumi ID ja MESSAGE\_CREATED – sõnumi loomise aeg.

## 2.3 Veateated

Veateateid on kahte tüüpi – kliendi vead ja teenusepakkuja tehnilised vead. Vead esitatakse standardse SOAP [fault](#) sõnumina.

Kliendi vead on seotud puuduliku sisendiga (valideerimisvead). Näiteks puudub mõni kohustuslik element. Kliendi veale viidatakse SOAP fault struktuuris järgmiselt:

```
<faultcode>env:Client</faultcode>  
<faultstring>Rakenduse kood on kohustuslik</faultstring>
```

Vigade loend:

- Rakenduse kood on kohustuslik

Tehnilised vead on seotud teenusepakkuja mõne sisemise süsteemi tõrkega. Tehnilisele veale viidatakse SOAP fault struktuuris järgmiselt:

```
<faultcode>env:Server</faultcode>  
<faultstring>An error occurred, please try again later</faultstring>
```

Vigade loend:

- An error occurred, please try again later

## 3 Näited

Erinevad näidissõnumid.

### 3.1 SOAP päring

```
<?xml version="1.0" encoding="utf-8"?>  
<env:Envelope  
  xmlns:env="http://schemas.xmlsoap.org/soap/envelope/"  
  xmlns:id="http://x-road.eu/xsd/identifiers"  
  xmlns:xrd="http://x-road.eu/xsd/xroad.xsd">  
  <env:Header>  
    <xrd:client id:objectType="SUBSYSTEM">  
      <id:xRoadInstance>EE</id:xRoadInstance>  
      <id:memberClass>COM</id:memberClass>  
      <id:memberCode>00000000</id:memberCode>  
      <id:subsystemCode>misp-client</id:subsystemCode>
```

```
</xrd:client>
<xrd:service id:objectType="SERVICE">
  <id:xRoadInstance>EE</id:xRoadInstance>
  <id:memberClass>GOV</id:memberClass>
  <id:memberCode>70000349</id:memberCode>
  <id:subsystemCode>mkriiides</id:subsystemCode>
  <id:serviceCode>downloadMime</id:serviceCode>
  <id:serviceVersion>v1</id:serviceVersion>
</xrd:service>
<xrd:id>4894e35d-bf0f-44a6-867a-8e51f1daa7e1</xrd:id>
<xrd:protocolVersion>4.0</xrd:protocolVersion>
</env:Header>
<env:Body>
  <mta:downloadMime xmlns:mta="http://emta-v6.x-road.eu">
    <request>
      <target>KMD2</target>
    </request>
  </mta:downloadMime>
</env:Body>
</env:Envelope>
```

## 3.2 SOAP vastus

```
<?xml version="1.0" encoding="utf-8"?>
<env:Envelope
  xmlns:env="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:id="http://x-road.eu/xsd/identifiers"
  xmlns:xrd="http://x-road.eu/xsd/xroad.xsd">
  <env:Header>
    <xrd:client id:objectType="SUBSYSTEM">
      <id:xRoadInstance>EE</id:xRoadInstance>
      <id:memberClass>COM</id:memberClass>
      <id:memberCode>00000000</id:memberCode>
      <id:subsystemCode>misp-client</id:subsystemCode>
    </xrd:client>
    <xrd:service id:objectType="SERVICE">
      <id:xRoadInstance>EE</id:xRoadInstance>
      <id:memberClass>GOV</id:memberClass>
      <id:memberCode>70000349</id:memberCode>
      <id:subsystemCode>mkriiides</id:subsystemCode>
      <id:serviceCode>downloadMime</id:serviceCode>
      <id:serviceVersion>v1</id:serviceVersion>
    </xrd:service>
    <xrd:userId>EE0000000000</xrd:userId>
    <xrd:id>4894e35d-bf0f-44a6-867a-8e51f1daa7e1</xrd:id>
    <xrd:protocolVersion>4.0</xrd:protocolVersion>
  </env:Header>
  <env:Body>
    <mta:downloadMimeResponse xmlns:mta="http://emta-v6.x-road.eu">
      <request>
```

```
        <target>KMD2</target>
    </request>
    <response>
        <faultCode>NOT_FOUND</faultCode>
        <faultString>Ootel sõnumeid ei leitud</faultString>
    </response>
</mta:downloadMimeResponse>
</env:Body>
</env:Envelope>
```

### 3.3 MIME vastus

HTTP transpordi päis:

**Content-type: multipart/related; boundary="MIME\_boundary"; type="text/xml"; start="<soapPart>"**

**--MIME\_boundary**

**Content-Type: text/xml; charset=utf-8**

**Content-Transfer-Encoding: 8bit**

**Content-ID: <soapPart>**

```
<env:Envelope
  xmlns:env="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:id="http://x-road.eu/xsd/identifiers"
  xmlns:xrd="http://x-road.eu/xsd/xroad.xsd">
  <env:Header>
    <xrd:client id:objectType="SUBSYSTEM">
      <id:xRoadInstance>EE</id:xRoadInstance>
      <id:memberClass>COM</id:memberClass>
      <id:memberCode>00000000</id:memberCode>
      <id:subsystemCode>misp-client</id:subsystemCode>
    </xrd:client>
    <xrd:service id:objectType="SERVICE">
      <id:xRoadInstance>EE</id:xRoadInstance>
      <id:memberClass>GOV</id:memberClass>
      <id:memberCode>70000349</id:memberCode>
      <id:subsystemCode>mkriiides</id:subsystemCode>
      <id:serviceCode>downloadMime</id:serviceCode>
      <id:serviceVersion>v1</id:serviceVersion>
    </xrd:service>
    <xrd:id>4894e35d-bf0f-44a6-867a-8e51f1daa7e1</xrd:id>
    <xrd:protocolVersion>4.0</xrd:protocolVersion>
  </env:Header>
  <env:Body>
    <mta:downloadMimeResponse xmlns:mta="http://emta-v6.x-road.eu">
      <request>
        <target>KMD2</target>
      </request>
```



```

<response>
  <file href="cid:6f55eb41-7b72-40fe-bb7f-49bfffef9ae4">
    BBC5AE4486FEDCE9F46A42AD985E6E39531...
  </file>
  <props>
    <prop key="MESSAGE_ID">ID:&lt;635881.1569849376008.0</prop>
    <prop key="MESSAGE_RECIPIENT">70000349</prop>
    <prop key="TARGET_SYSTEM">KMD2</prop>
    <prop key="MESSAGE_CREATED">2018-02-25T15:28:51</prop>
    <prop key="ID">123456788</prop>
  </props>
</response>
</mta:downloadMimeResponse>
</env:Body>
</env:Envelope>
--MIME_boundary
Content-Type: application/octet-stream
Content-Transfer-Encoding: binary
Content-Disposition: attachment; filename=test.xml
Content-ID: <6f55eb41-7b72-40fe-bb7f-49bfffef9ae4>
<xml>test</xml>
--MIME_boundary--

```

### 3.4 SOAP veateade

```

<?xml version="1.0" encoding="utf-8"?>
<env:Envelope
  xmlns:env="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:id="http://x-road.eu/xsd/identifiers"
  xmlns:xrd="http://x-road.eu/xsd/xroad.xsd">
  <env:Header>
    <xrd:client id:objectType="SUBSYSTEM">
      <id:xRoadInstance>EE</id:xRoadInstance>
      <id:memberClass>COM</id:memberClass>
      <id:memberCode>00000000</id:memberCode>
      <id:subsystemCode>client</id:subsystemCode>
    </xrd:client>
    <xrd:service id:objectType="SERVICE">
      <id:xRoadInstance>EE</id:xRoadInstance>
      <id:memberClass>GOV</id:memberClass>
      <id:memberCode>70000349</id:memberCode>
      <id:subsystemCode>mkriides</id:subsystemCode>
      <id:serviceCode>downloadMime</id:serviceCode>
      <id:serviceVersion>v1</id:serviceVersion>
    </xrd:service>
    <xrd:id>4894e35d-bf0f-44a6-867a-8e51f1daa7e1</xrd:id>
    <xrd:protocolVersion>4.0</xrd:protocolVersion>
  </env:Header>
  <env:Body>

```

```
<env:Fault>
  <faultcode>env:Client</faultcode>
  <faultstring>Rakenduse kood on kohustuslik</faultstring>
</env:Fault>
</env:Body>
</env:Envelope>
```

### 3.5 Teenuse WSDL

Teenuse WSDL-i saab alla laadida X-tee turvaserverist:

<https://x-tee.ee/catalogudata/EE/EE/GOV/70000349/mkrliides/12.wsdl>

```
<wsdl:definitions name="mkrliides" targetNamespace="http://emta-v6.x-road.eu"
  xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
  xmlns:tns="http://emta-v6.x-road.eu"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
  xmlns:xrd="http://x-road.eu/xsd/xroad.xsd"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <wsdl:types>
    <schema xmlns="http://www.w3.org/2001/XMLSchema"
      targetNamespace="http://emta-v6.x-road.eu">
      <import namespace="http://x-road.eu/xsd/xroad.xsd"
        schemaLocation="http://x-road.eu/xsd/xroad.xsd"/>
      <!-- downloadMime Request -->
      <element name="downloadMime">
        <complexType>
          <sequence>
            <element name="request" type="tns:DownloadMimeRequestType"/>
          </sequence>
        </complexType>
      </element>
      <complexType name="DownloadMimeRequestType">
        <sequence>
          <element name="target" type="string">
            <annotation>
              <appinfo>
                <xrd:title xml:lang="et">Rakenduse kood</xrd:title>
                <xrd:notes xml:lang="et">
                  Maksu- ja Tolliamet rakenduse kood (TSD, KMD2, jne)
                </xrd:notes>
              </appinfo>
            </annotation>
          </element>
        </sequence>
      </complexType>
    </wsdl:types>
  </wsdl:definitions>
```

```
</element>
<element minOccurs="0" name="id" type="string">
  <annotation>
    <appinfo>
      <xrd:title xml:lang="et">Manuse ID</xrd:title>
    </appinfo>
  </annotation>
</element>
</sequence>
</complexType>
<!-- downloadMime Response -->
<element name="downloadMimeResponse">
  <complexType>
    <sequence>
      <element name="request" type="tns:DownloadMimeRequestType"/>
      <element name="response" type="tns:DownloadMimeResponseType"/>
    </sequence>
  </complexType>
</element>
<complexType name="DownloadMimeResponseType">
  <sequence>
    <choice>
      <sequence>
        <element name="faultCode" type="string"/>
        <element name="faultString" type="string"/>
      </sequence>
      <sequence>
        <element minOccurs="0" name="file">
          <annotation>
            <appinfo>
              <xrd:title xml:lang="et">Viide manusele</xrd:title>
            </appinfo>
          </annotation>
          <complexType>
            <simpleContent>
              <extension base="hexBinary">
                <attribute name="href" type="string"/>
              </extension>
            </simpleContent>
          </complexType>
        </element>
        <element minOccurs="0" name="props" type="tns:Properties">
          <annotation>
            <appinfo>
              <xrd:title xml:lang="et">
                Lisainfo manuse kohta
              </xrd:title>
            </appinfo>
          </annotation>
        </element>
      </sequence>
    </choice>
  </sequence>
</complexType>
</element>
```

```

        </appinfo>
        </annotation>
        </attribute>
        </extension>
        </simpleContent>
        </complexType>
    </element>
</sequence>
</complexType>
</schema>
</wsdl:types>

<!-- downloadMime SOAP body -->
<wsdl:message name="downloadMime">
    <wsdl:part element="tns:downloadMime" name="parameters"/>
</wsdl:message>

<!-- downloadMimeResponse SOAP body with attachment (MIME) -->
<wsdl:message name="downloadMimeResponse">
    <wsdl:part element="tns:downloadMimeResponse" name="parameters"/>
    <wsdl:part type="xsd:base64Binary" name="attachment"/>
</wsdl:message>

<!-- XRoad SOAP header -->
<wsdl:message name="xrdHeader">
    <wsdl:part element="xrd:client" name="client"/>
    <wsdl:part element="xrd:service" name="service"/>
    <wsdl:part element="xrd:id" name="id"/>
    <wsdl:part element="xrd:protocolVersion" name="protocolVersion"/>
</wsdl:message>
<!-- downloadMimeResponse SOAP body with attachment (MIME) -->
<wsdl:message name="downloadMimeResponse">
    <wsdl:part element="tns:downloadMimeResponse" name="parameters"/>
    <wsdl:part type="xsd:base64Binary" name="attachment"/>
</wsdl:message>
<wsdl:portType name="webServiceInterface">
    <wsdl:operation name="downloadMime">
        <wsdl:documentation>
            <xrd:title xml:lang="et">Failide allalaadimise teenus</xrd:title>
        </wsdl:documentation>
        <wsdl:input message="tns:downloadMime"/>
        <wsdl:output message="tns:downloadMimeResponse"/>
    </wsdl:operation>
</wsdl:portType>

<wsdl:binding name="soapBindings" type="tns:webServiceInterface">
    <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
    <wsdl:operation name="downloadMime">
        <soap:operation soapAction=""/>
        <xrd:version>v1</xrd:version>
    <wsdl:input>

```

```
<soap:header message="tns:xrdHeader" part="client" use="literal"/>
<soap:header message="tns:xrdHeader" part="service" use="literal"/>
<soap:header message="tns:xrdHeader" part="id" use="literal"/>
<soap:header message="tns:xrdHeader" part="protocolVersion" use="literal"/>
<soap:body use="literal"/>
</wsdl:input>
<wsdl:output>
  <mime:multipartRelated xmlns:mime="http://schemas.xmlsoap.org/wsdl/mime/">
    <mime:part>
      <soap:header message="tns:xrdHeader" part="client" use="literal"/>
      <soap:header message="tns:xrdHeader" part="service" use="literal"/>
      <soap:header message="tns:xrdHeader" part="id" use="literal"/>
      <soap:header message="tns:xrdHeader" part="protocolVersion" use="literal"/>
      <soap:body parts="parameters" use="literal"/>
    </mime:part>
    <mime:part>
      <mime:content part="attachment" type="application/octet-stream"/>
    </mime:part>
  </mime:multipartRelated>
</wsdl:output>
</wsdl:operation>
</wsdl:binding>
<wsdl:service name="webService">
  <wsdl:port binding="tns:soapBindings" name="port">
    <soap:address location="http://SERVER_URL"/>
  </wsdl:port>
</wsdl:service>
</wsdl:definitions>
```