IdP Attribute Release

How to Test Attribute Release?

The best way to see if your IdP is releasing attributes properly to eduGAIN services is testing it with the eduGAIN Attribute Release Check, which is an easy way to find out if an IdP is configured properly.

Which are the most requested attributes?

According to best common practices Service Providers should publish the attributes they require or desired in metadata, either explicitly using a `<Request edAttribute>` element or implicitly, via the R&S entity category. Based on these numbers an IdP ideally should be able to release the following attributes:

- eduPersonPrincipalName (urn:oid:1.3.6.1.4.1.5923.1.1.1.6)
- mail (urn:oid:0.9.2342.19200300.100.1.3)
- eduPersonTargetedID (urn:oid:1.3.6.1.4.1.5923.1.1.1.10)
- givenName (urn:oid:2.5.4.42)
- sn (urn:oid:2.5.4.4)
- displayName (urn:oid:2.16.840.1.113730.3.1.241)
- cn (urn:oid:2.5.4.3)
- eduPersonScopedAffiliation (urn:oid:1.3.6.1.4.1.5923.1.1.1.9)
- eduPersonAffiliation (urn:oid:1.3.6.1.4.1.5923.1.1.1.1)
- eduPersonEntitlement (urn:oid:1.3.6.1.4.1.5923.1.1.1.7)
- schacHomeOrganization (urn:oid:1.3.6.1.4.1.25178.1.2.9)

It is easily possible to create a list of the most requested attributes of eduGAIN Service Providers. Using a script to generate these attribute statistics, the complete results are as follows (data from August 21st 2018):

**Total SPs: 2135**
- With requested attributes/R&S: 5326
- Without requested attributes/R&S: -3191

**Total Requested Attributes: 4735**
- Attributes with isRequired=true: 1606 (33.9%)
- Attributes with implicit isRequired=false: 2371 (50.1%)
- Attributes with explicit isRequired=false: 0 (0%)
182 SAML attributes with their most used friendly name sorted by popularity:

* eduPersonPrincipalName (urn:oid:1.3.6.1.4.1.5923.1.1.1.6)
  Requested: 24.37%
  Required: 3.8%
  Desired: 8.09%
* mail (urn:oid:0.9.2342.19200300.100.1.3)
  Requested: 24.05%
  Required: 4.41%
  Desired: 7.16%
* eduPersonTargetedID (urn:oid:1.3.6.1.4.1.5923.1.1.1.10)
  Requested: 19.96%
  Required: 2.28%
  Desired: 5.2%
* givenName (urn:oid:2.5.4.42)
  Requested: 19.18%
  Required: 1.63%
  Desired: 5.07%
* sn (urn:oid:2.5.4.4)
  Requested: 18.75%
  Required: 1.67%
  Desired: 4.6%
* eduPersonScopedAffiliation (urn:oid:1.3.6.1.4.1.5923.1.1.1.9)
  Requested: 17.99%
  Required: 1.82%
  Desired: 3.7%
* displayName (urn:oid:2.16.840.1.113730.3.1.241)
  Requested: 17.04%
  Required: 1.8%
  Desired: 2.77%
* cn (urn:oid:2.5.4.3)
  Requested: 5.66%
  Required: 1.35%
  Desired: 4.31%
* eduPersonAffiliation (urn:oid:1.3.6.1.4.1.5923.1.1.1.1)
  Requested: 4.84%
  Required: 0.91%
  Desired: 3.93%
* eduPersonEntitlement (urn:oid:1.3.6.1.4.1.5923.1.1.1.7)
  Requested: 1.88%
  Required: 0.63%
  Desired: 1.25%
* schacHomeOrganization (urn:oid:1.3.6.1.4.1.25178.1.2.9)
  Requested: 1.27%
  Required: 0.82%
  Desired: 0.44%

Also an IdP should support the following name ID formats:

* Transient NameIDFormat (urn:oasis:names:tc:SAML:2.0:nameid-format:transient)
  Requested: 4.18%
  Required: 42.34%
  Desired: 7.05%

* Persistent NameIDFormat (urn:oasis:names:tc:SAML:2.0:nameid-format:persistent)
  Requested: 2.28%
  Required: 20.04%
  Desired: 3.34%

If your IdP supports the above attributes, it should be more capable of addressing most attribute request. Some less frequently attributes and NameID formats, which probably are either using non-standard names (i.e. urn:mace:dir:... names instead of urn:oid:... names) or are mostly used in a local context are:

* o (urn:oid:2.5.4.10)
  Requested: 1.25%
  Required: 0.32%
  Desired: 0.93%
* NameIdentifier NameIDFormat (urn:mace:shibboleth:1.0:nameIdentifier)
  Requested: 1.1%
  Required: 12.19%
  Desired: 2.03%
* uid (urn:oid:0.9.2342.19200300.100.1.1)
  Requested: 0.95%
  Required: 0.38%
<table>
<thead>
<tr>
<th>Attribute</th>
<th>Desired</th>
<th>Requested</th>
<th>Required</th>
<th>Desired</th>
</tr>
</thead>
<tbody>
<tr>
<td>eduPersonTargetedID</td>
<td>0.57%</td>
<td>0.87%</td>
<td>0.06%</td>
<td>0.8%</td>
</tr>
<tr>
<td>eduPersonScopedAffiliation</td>
<td>0.82%</td>
<td>0.82%</td>
<td>0%</td>
<td>0.82%</td>
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<tr>
<td>eduPersonPrincipalName</td>
<td>0.7%</td>
<td>0.7%</td>
<td>0.04%</td>
<td>0.65%</td>
</tr>
<tr>
<td>eduPersonPrimaryAffiliation</td>
<td>0.61%</td>
<td>0.87%</td>
<td>0.04%</td>
<td>0.06%</td>
</tr>
<tr>
<td>eduPersonScopedAffiliation</td>
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<tr>
<td>requestedLanguage</td>
<td>0.49%</td>
<td>0.49%</td>
<td>0.32%</td>
<td>0.17%</td>
</tr>
<tr>
<td>mail</td>
<td>0.42%</td>
<td>0.42%</td>
<td>0.04%</td>
<td>0.38%</td>
</tr>
<tr>
<td>transientId</td>
<td>0.38%</td>
<td>0.38%</td>
<td>0.04%</td>
<td>0.15%</td>
</tr>
<tr>
<td>schacHomeOrganizationType</td>
<td>0.38%</td>
<td>0.38%</td>
<td>0.08%</td>
<td>0.23%</td>
</tr>
<tr>
<td>emailAddressNameIDFormat</td>
<td>0.38%</td>
<td>0.38%</td>
<td>0.27%</td>
<td>0.04%</td>
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<tr>
<td>eduPersonAssurance</td>
<td>0.32%</td>
<td>0.32%</td>
<td>0.13%</td>
<td>0.19%</td>
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<tr>
<td>telephoneNumber</td>
<td>0.27%</td>
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<td>ou</td>
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<tr>
<td>eduPersonNickname</td>
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<td>0.27%</td>
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<td>0.19%</td>
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<tr>
<td>eduPersonOrgUnitDN</td>
<td>0.27%</td>
<td>0.27%</td>
<td>0.08%</td>
<td>0.19%</td>
</tr>
<tr>
<td>unspecifiedNameIDFormat</td>
<td>0.25%</td>
<td>0.25%</td>
<td>0.02%</td>
<td>0%</td>
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<tr>
<td>eduPersonOrcid</td>
<td>0.23%</td>
<td>0.23%</td>
<td>0.06%</td>
<td>0.17%</td>
</tr>
<tr>
<td>eduPersonOrgDN</td>
<td>0.23%</td>
<td>0.23%</td>
<td>0.08%</td>
<td>0.15%</td>
</tr>
<tr>
<td>displayName</td>
<td>0.21%</td>
<td>0.21%</td>
<td>0%</td>
<td>0.21%</td>
</tr>
<tr>
<td>eduPersonPrimaryOrgUnitDN</td>
<td>0.19%</td>
<td>0.19%</td>
<td>0%</td>
<td>0.19%</td>
</tr>
</tbody>
</table>
Required: 0.08%
Desired: 0.11%
* eduPersonAffiliation (urn:mace:dir:attribute-def:eduPersonAffiliation)
  Requested: 0.17%
  Required: 0%
  Desired: 0.17%
* title (urn:oid:2.5.4.12)
  Requested: 0.17%
  Required: 0.04%
  Desired: 0.13%
* schacPersonalUniqueID (urn:oid:1.3.6.1.4.1.25178.1.2.15)
  Requested: 0.17%
  Required: 0.17%
  Desired: 0%
* givenName (urn:mace:dir:attribute-def:givenName)
  Requested: 0.15%
  Required: 0.02%
  Desired: 0.13%
* supannEtablissement (urn:oid:1.3.6.1.4.1.7135.1.2.1.14)
  Requested: 0.15%
  Required: 0.13%
  Desired: 0.02%
* cn (urn:mace:dir:attribute-def:cn)
  Requested: 0.15%
  Required: 0.02%
  Desired: 0.13%
* mobile (urn:oid:0.9.2342.19200300.100.1.41)
  Requested: 0.15%
  Required: 0.08%
  Desired: 0.06%
* sn (urn:mace:dir:attribute-def:sn)
  Requested: 0.15%
  Required: 0.02%
  Desired: 0.13%
* employeeNumber (urn:oid:2.16.840.1.113730.3.1.3)
  Requested: 0.13%
  Required: 0.06%
  Desired: 0.06%
* supannEtuId (urn:oid:1.3.6.1.4.1.7135.1.2.1.10)
  Requested: 0.11%
  Required: 0.02%
  Desired: 0.08%
* eduOrgLegalName (urn:oid:1.3.6.1.4.1.5923.1.2.1.4)
  Requested: 0.11%
  Required: 0.02%
  Desired: 0.08%
* norEduPersonLIN (urn:oid:1.3.6.1.4.1.2428.90.1.4)
  Requested: 0.11%
  Required: 0.11%
  Desired: 0%
* postalAddress (urn:oid:2.5.4.16)
  Requested: 0.11%
  Required: 0.08%
  Desired: 0.02%
* l (urn:oid:2.5.4.7)
  Requested: 0.11%
  Required: 0.04%
  Desired: 0.06%
* employeeID (urn:oid:1.2.840.113556.1.4.35)
  Requested: 0.08%
  Required: 0%
  Desired: 0.08%
* schacPersonalUniqueCode (urn:oid:1.3.6.1.4.1.25178.1.2.14)
  Requested: 0.08%
  Required: 0.04%
  Desired: 0.04%
* schacCountryOfCitizenship (urn:oid:1.3.6.1.4.1.25178.1.2.5)
  Requested: 0.08%
  Required: 0.08%
  Desired: 0%
* postalCode (urn:oid:2.5.4.17)
  Requested: 0.08%
  Required: 0.02%
  Desired: 0.06%
* X509SubjectName NameIDFormat (urn:oasis:names:tc:SAML:1.1:nameid-format:X509SubjectName)
  Requested: 0.08%
  Required: 0.15%
  Desired: 0.02%
* supannEntiteAffectation (urn:oid:1.3.6.1.4.1.7135.1.2.1.8)
Requested: 0.08%
Required: 0.06%
Desired: 0.02%
* eduPersonEntitlement (urn:mace:dir:attribute-def:eduPersonEntitlement)
  Requested: 0.08%
  Required: 0%
  Desired: 0.08%
* eduPersonAssurance (urn:mace:dir:attribute-def:eduPersonAssurance)
  Requested: 0.08%
  Required: 0%
  Desired: 0.08%
* homePostalAddress (urn:oid:0.9.2342.19200300.100.1.39)
  Requested: 0.08%
  Required: 0.08%
  Desired: 0%
* employeeNumber (urn:oid:1.2.840.113556.1.2.610)
  Requested: 0.08%
  Required: 0%
  Desired: 0.08%
* facsimileTelephoneNumber (urn:oid:2.5.4.23)
  Requested: 0.08%
  Required: 0.04%
  Desired: 0.04%
* eduPersonPrimaryAffiliation (urn:mace:dir:attribute-def:eduPersonPrimaryAffiliation)
  Requested: 0.06%
  Required: 0%
  Desired: 0.06%
* street (urn:oid:2.5.4.9)
  Requested: 0.06%
  Required: 0.02%
  Desired: 0.04%
* seeAlso (urn:oid:2.5.4.34)
  Requested: 0.06%
  Required: 0.02%
  Desired: 0.04%
* ou (urn:mace:dir:attribute-def:ou)
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  Required: 0%
  Desired: 0.06%
* employeeType (urn:oid:1.2.840.113556.1.2.613)
  Requested: 0.06%
  Required: 0%
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* initials (urn:oid:2.5.4.43)
  Requested: 0.06%
  Required: 0.02%
  Desired: 0.04%
* postOfficeBox (urn:oid:2.5.4.18)
  Requested: 0.06%
  Required: 0.02%
  Desired: 0.04%
* businessCategory (urn:oid:2.5.4.15)
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* o (urn:mace:dir:attribute-def:o)
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* isMemberOf (urn:oid:1.3.6.1.4.1.5923.1.5.1.1)
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  Desired: 0.02%
* description (urn:oid:2.5.4.13)
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* homePhone (urn:oid:0.9.2342.19200300.100.1.20)
  Requested: 0.06%
  Required: 0.06%
  Desired: 0%
* manager (urn:mace:dir:attribute-def:manager)
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* st (urn:oid:2.5.4.8)
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* facsimileTelephoneNumber (urn:mace:dir:attribute-def:facsimileTelephoneNumber)
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  Desired: 0.04%
* departmentNumber (urn:mace:dir:attribute-def:departmentNumber)
  Requested: 0.04%
  Required: 0%
  Desired: 0.04%
* eduPersonPrimaryOrgUnitDN (urn:mace:dir:attribute-def:eduPersonPrimaryOrgUnitDN)
  Requested: 0.04%
  Required: 0%
  Desired: 0.04%
* carLicense (urn:oid:2.16.840.1.113730.3.1.1)
  Requested: 0.04%
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  Desired: 0.04%
* initials (urn:mace:dir:attribute-def:initials)
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* carLicense (urn:mace:dir:attribute-def:carLicense)
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* title (urn:mace:dir:attribute-def:title)
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* telephoneNumber (urn:mace:dir:attribute-def:telephoneNumber)
  Requested: 0.04%
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* street (urn:mace:dir:attribute-def:street)
  Requested: 0.04%
  Required: 0%
  Desired: 0.04%
* st (urn:mace:dir:attribute-def:st)
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* manager (urn:oid:0.9.2342.19200300.100.1.10)
  Requested: 0.04%
  Required: 0%
  Desired: 0.04%
* schacMotherTongue (urn:oid:1.3.6.1.4.1.25178.1.2.1)
  Requested: 0.04%
  Required: 0.02%
  Desired: 0.04%
* l (urn:mace:dir:attribute-def:l)
  Requested: 0.04%
  Required: 0%
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* supannEntiteAffectationPrincipale (urn:oid:1.3.6.1.4.1.7135.1.2.1.13)
  Requested: 0.04%
  Required: 0.02%
  Desired: 0.02%
* supannOrganisme (urn:oid:1.3.6.1.4.1.7135.1.2.1.3)
  Requested: 0.04%
  Required: 0.02%
  Desired: 0.02%
* seeAlso (urn:mace:dir:attribute-def:seeAlso)
  Requested: 0.04%
  Required: 0%
  Desired: 0.04%
* preferredLanguage (urn:mace:dir:attribute-def:preferredLanguage)
  Requested: 0.04%
  Required: 0%
  Desired: 0.04%
* postofficeBox (urn:mace:dir:attribute-def:postOfficeBox)
  Requested: 0.04%
  Required: 0%
  Desired: 0.04%
* postalCode (urn:mace:dir:attribute-def:postalCode)
  Requested: 0.04%
  Required: 0%
  Desired: 0.04%
* swissEduID (urn:oid:2.16.756.1.2.5.1.1.13)
  Requested: 0.04%
  Required: 0.04%
Desired: 0%
* userCertificate (urn:oid:2.5.4.36)
  Requested: 0.04%
  Required: 0.04%
  Desired: 0%
* employeeNumber (urn:mace:dir:attribute-def:employeeNumber)
  Requested: 0.04%
  Required: 0%
  Desired: 0.04%
* departmentNumber (urn:oid:2.16.840.1.113730.3.1.2)
  Requested: 0.04%
  Required: 0%
  Desired: 0.04%
* schacDateOfBirth (urn:oid:1.3.6.1.4.1.25178.1.2.3)
  Requested: 0.04%
  Required: 0.04%
  Desired: 0%
* eduPersonPrincipalName (eduPersonPrincipalName)
  Requested: 0.04%
  Required: 0%
  Desired: 0.04%
* mail (mail)
  Requested: 0.04%
  Required: 0%
  Desired: 0.04%
* givenName (givenName)
  Requested: 0.04%
  Required: 0%
  Desired: 0.04%
* sn (sn)
  Requested: 0.04%
  Required: 0%
  Desired: 0.04%
* auEduPersonSharedToken (urn:oid:1.3.6.1.4.1.27856.1.2.5)
  Requested: 0.04%
  Required: 0.02%
  Desired: 0.02%
* eduPersonNickname (urn:mace:dir:attribute-def:eduPersonNickname)
  Requested: 0.04%
  Required: 0%
  Desired: 0.04%
* eduPersonOrgDN (urn:mace:dir:attribute-def:eduPersonOrgDN)
  Requested: 0.04%
  Required: 0%
  Desired: 0.04%
* Kerberos NameIDFormat (urn:oasis:names:tc:SAML:2.0:nameid-format:kerberos)
  Requested: 0.04%
  Required: 0.02%
  Desired: 0%
* WindowsDomainQualifiedName NameIDFormat (urn:oasis:names:tc:SAML:1.1:nameid-format:WindowsDomainQualifiedName)
  Requested: 0.04%
  Required: 0.02%
  Desired: 0%
* eduPersonOrgUnitDN (urn:mace:dir:attribute-def:eduPersonOrgUnitDN)
  Requested: 0.04%
  Required: 0%
  Desired: 0.04%
* physicalDeliveryOfficeName (urn:oid:2.5.4.19)
  Requested: 0.04%
  Required: 0%
  Desired: 0.04%
* physicalDeliveryOfficeName (urn:mace:dir:attribute-def:physicalDeliveryOfficeName)
  Requested: 0.04%
  Required: 0%
  Desired: 0.04%
* eduCourseOffering (urn:oid:1.3.6.1.4.1.5923.1.6.1.1)
  Requested: 0.04%
  Required: 0.02%
  Desired: 0.02%
* businessCategory (urn:mace:dir:attribute-def:businessCategory)
  Requested: 0.04%
  Required: 0%
  Desired: 0.04%
* eduCourseMember (urn:oid:1.3.6.1.4.1.5923.1.6.1.2)
  Requested: 0.04%
  Required: 0.02%
  Desired: 0.02%
* labeledURI (urn:oid:1.3.6.1.4.1.250.1.57)
  Requested: 0.04%
* funetEduPersonECTS (urn:oid:1.3.6.1.4.1.16161.1.1.19)
  Requested: 0.02%
  Required: 0.02%
  Desired: 0%
* userPresenceID (urn:oid:1.3.6.1.4.1.25178.1.2.12)
  Requested: 0.02%
  Required: 0.02%
  Desired: 0%
* eduroamUID (http://eduroam.cz/attributes/eduroamUID)
  Requested: 0.02%
  Required: 0%
  Desired: 0%
* supannAutreMail (urn:oid:1.3.6.1.4.1.7135.1.2.1.34)
  Requested: 0.02%
  Required: 0.02%
  Desired: 0%
* supannRoleGenerique (urn:oid:1.3.6.1.4.1.7135.1.2.1.23)
  Requested: 0.02%
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  Desired: 0%
* supannEtuTypeDiplome (urn:oid:1.3.6.1.4.1.7135.1.2.1.33)
  Requested: 0.02%
  Required: 0.02%
  Desired: 0%
* supannEtuSecteurDisciplinaire (urn:oid:1.3.6.1.4.1.7135.1.2.1.32)
  Requested: 0.02%
  Required: 0.02%
  Desired: 0%
* supannEtuRegimeInscription (urn:oid:1.3.6.1.4.1.7135.1.2.1.31)
  Requested: 0.02%
  Required: 0.02%
  Desired: 0%
* funetEduPersonCreditUnits (urn:oid:1.3.6.1.4.1.16161.1.1.118)
  Requested: 0.02%
  Required: 0.02%
  Desired: 0%
* supannEtuEtape (urn:oid:1.3.6.1.4.1.7135.1.2.1.29)
  Requested: 0.02%
  Required: 0.02%
  Desired: 0%
* supannEtuElementPedagogique (urn:oid:1.3.6.1.4.1.7135.1.2.1.28)
  Requested: 0.02%
  Required: 0.02%
  Desired: 0%
* supannEtuDiplome (urn:oid:1.3.6.1.4.1.7135.1.2.1.27)
  Requested: 0.02%
  Required: 0.02%
  Desired: 0%
* supannEtuCursusAnnee (urn:oid:1.3.6.1.4.1.7135.1.2.1.26)
  Requested: 0.02%
  Required: 0.02%
  Desired: 0%
* supannEtuAnneeInscription (urn:oid:1.3.6.1.4.1.7135.1.2.1.25)
  Requested: 0.02%
  Required: 0.02%
  Desired: 0%
* supannRoleEntite (urn:oid:1.3.6.1.4.1.7135.1.2.1.24)
  Requested: 0.02%
  Required: 0.02%
  Desired: 0%
* supannRole (urn:oid:1.3.6.1.4.1.7135.1.2.1.21)
  Requested: 0.02%
  Required: 0.02%
  Desired: 0%
* schacPersonalPosition (urn:oid:1.3.6.1.4.1.25178.1.2.13)
  Requested: 0.02%
  Required: 0%
  Desired: 0.02%
* supannActivite (urn:oid:1.3.6.1.4.1.7135.1.2.1.2)
  Requested: 0.02%
  Required: 0.02%
  Desired: 0%
* supannMailPerso (urn:oid:1.3.6.1.4.1.7135.1.2.1.15)
  Requested: 0.02%
  Required: 0.02%
  Desired: 0%
* supannAutreTelephone (urn:oid:1.3.6.1.4.1.7135.1.2.1.12)
  Requested: 0.02%
  Required: 0.02%
Desired: 0%
* supannEmpId (urn:oid:1.3.6.1.4.1.7135.1.2.1.11)
  Requested: 0.02%
  Required: 0.02%
  Desired: 0%
* supannListeRouge (urn:oid:1.3.6.1.4.1.7135.1.2.1.1)
  Requested: 0.02%
  Required: 0.02%
  Desired: 0%
* swissEduPersonHomeOrganizationType (urn:oid:2.16.756.1.2.5.1.1.5)
  Requested: 0.02%
  Required: 0%
  Desired: 0.02%
* swissEduPersonUniqueID (urn:oid:2.16.756.1.2.5.1.1.1)
  Requested: 0.02%
  Required: 0%
  Desired: 0.02%
* schacPersonalTitle (urn:oid:1.3.6.1.4.1.25178.1.2.8)
  Requested: 0.02%
  Required: 0%
  Desired: 0.02%
* schacYearOfBirth (urn:oid:1.3.6.1.4.1.25178.1.0.2.3)
  Requested: 0.02%
  Required: 0.02%
  Desired: 0%
* norEduPersonNIN (urn:oid:1.3.6.1.4.1.2428.90.1.5)
  Requested: 0.02%
  Required: 0.02%
  Desired: 0%
* urn:oid:1.3.6.1.4.1.23735.100.0 (urn:oid:1.3.6.1.4.1.23735.100.0)
  Requested: 0.02%
  Required: 0%
  Desired: 0.02%