

Tagging an entity with Research and Scholarship entity attribute

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This article describes mechanics of tagging an entity in SAML metadata. See [Research and Scholarship category](#) for an introduction.

To register your entity for Research and Scholarship (R&S) category, see:

For identity provider

[Support Research and Scholarship category in identity provider](#)

For service provider

[Apply for Research and Scholarship category for service provider](#)

The <http://refeds.org/category/research-and-scholarship> entity attribute expresses qualification or support for the Research & Scholarship (R&S) entity category, service providers (SP) and identity providers (IdP) in the SAML metadata. Because of the semantic differences (an IdP "supports" R&S, where as a SP "qualifies" for R&S), the entity attribute is placed in slightly different places in the metadata:

Tagging a service provider

A service provider satisfying the requirements of the [REFEDS R&S Entity category](#) qualifies for, or is a member of the Research and Scholarship entity category. In SAML metadata, this is expressed by adding a <saml:Attribute> name value pair with the attribute name of <http://macedir.org/entity-category> and attribute value of <http://refeds.org/category/research-and-scholarship> to the SP's metadata.

The semantics of entity attribute names are specified in [The Entity Category SAML Entity Metadata Attribute Type](#) (draft-macedir-entity-attribute-00.xml).

For backwards compatibility, an R&S SP also carries the [legacy InCommon-only R&S entity attribute value](#) (<http://id.incommon.org/category/research-and-scholarship>). Every InCommon registered R&S SP has the following multivalued entity attribute in metadata:

A multivalued entity attribute for R&S SPs

```
<mdattr:EntityAttributes
  xmlns:mdattr="urn:oasis:names:tc:SAML:metadata:attribute">
  <!-- multivalued entity attribute for R&S SPs -->
  <saml:Attribute
    xmlns:saml="urn:oasis:names:tc:SAML:2.0:assertion"
    NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri"
    Name="http://macedir.org/entity-category">
    <!-- the incommon.org R&S entity attribute value -->
    <saml:AttributeValue>
      http://id.incommon.org/category/research-and-scholarship
    </saml:AttributeValue>
    <!-- the refeds.org R&S entity attribute value -->
    <saml:AttributeValue>
      http://refeds.org/category/research-and-scholarship
    </saml:AttributeValue>
  </saml:Attribute>
</mdattr:EntityAttributes>
```



Legacy InCommon-only R&S entity attribute is not exported to eduGAIN

In addition to being deprecated, the <http://id.incommon.org/category/research-and-scholarship> entity attribute value was only used in the InCommon Federation. It is filtered and excluded from SP metadata exported to eduGAIN. Only the REFEDS R&S entity attribute value is exported to eduGAIN.

Related content

- [Entity Categories](#)
- [InCommon-Only Research and Scholarship category \(deprecated\)](#)
- [REFEDS Research and Scholarship category](#)
- [Service provider - apply for Research and Scholarship category](#)
- [Research and Scholarship FAQ](#)
- [Tagging an entity with Research and Scholarship entity attribute](#)
- [Registered by InCommon category](#)
- [Configure IdP to release R and S attributes](#)
- [Sirtfi category](#)
- [Federation references](#)

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Managing the SP R&S entity attribute

The InCommon Federation operator is the registration authority responsible for tagging qualifying SP's with R&S entity attribute. Other than qualifying and [applying for Research and Scholarship category for service provider](#), there is nothing an SP operator needs to do to manage this entity attribute.

Tagging an identity provider

A identity provider (IdP) satisfying the requirements of the [REFEDS R&S entity category](#) is said to "support" Research and Scholarship entity category. In SAML metadata, this is expressed by adding a <saml:Attribute> name value pair with the attribute name of <http://macedir.org/entity-category-support> and attribute value of <http://refeds.org/category/research-and-scholarship> to the SP's metadata.

An IdP asserting the REFEDS R&R entity attribute value agrees to release the R&S attribute bundle to **all** R&S SPs, including R&S SPs in other federations.

An entity attribute for IdPs that support all R&S SPs globally

```
<mdattr:EntityAttributes
  xmlns:mdattr="urn:oasis:names:tc:SAML:metadata:attribute">
  <!-- entity attribute for IdPs that support R&S SPs globally -->
  <saml:Attribute
    xmlns:saml="urn:oasis:names:tc:SAML:2.0:assertion"
    NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri"
    Name="http://macedir.org/entity-category-support">
    <!-- the refeds.org R&S entity attribute value -->
    <saml:AttributeValue>
      http://refeds.org/category/research-and-scholarship
    </saml:AttributeValue>
  </saml:Attribute>
</mdattr:EntityAttributes>
```

Legacy InCommon-only R&S entity attribute

A deprecated, InCommon-only R&S entity attribute (<http://id.incommon.org/category/research-and-scholarship>) expresses [similar support](#) for R&S attribute release, but only to R&S SPs registered by InCommon only.

An entity attribute for IdPs that support R&S SPs registered by InCommon only

```
<mdattr:EntityAttributes
  xmlns:mdattr="urn:oasis:names:tc:SAML:metadata:attribute">
  <!-- entity attribute for IdPs that support R&S SPs
    registered by InCommon -->
  <saml:Attribute
    xmlns:saml="urn:oasis:names:tc:SAML:2.0:assertion"
    NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri"
    Name="http://macedir.org/entity-category-support">
    <!-- the incommon.org R&S entity attribute value -->
    <saml:AttributeValue>
      http://id.incommon.org/category/research-and-scholarship
    </saml:AttributeValue>
  </saml:Attribute>
</mdattr:EntityAttributes>
```

Although it is exported to eduGAIN in an IdP's metadata, the InCommon-only R&S entity attribute value has no recognized meaning outside the InCommon Federation. *Only IdPs that release attributes to **all** R&S SPs globally and tagged with the REFEDS R&S entity attribute value are recognized as R&S IdPs by the international R&E community.*

Syntax implications

The R&S entity attribute in IdP metadata is single-valued, which means an IdP can only support one R&S entity attribute (either REFEDS or InCommon-only) at a time. This decision affects service providers.

An SP that depends on the R&S entity attribute in IdP metadata must take into account the fact that an R&S IdP will carry either the InCommon-only R&S entity attribute or the REFEDS R&S entity attribute but **not both**.

To maintain backward compatibility during transition to use the global (REFEDS) R&S entity attribute, the InCommon Federation automatically tags its registered R&S SP with both values so that InCommon Federation registered R&S SP automatically receives attributes from either type of R&S IdP.

In other words, if an SP deployment is configured to recognize the [incommon.org](#) R&S tag in IdP metadata, it should be configured to recognize the [refeds.org](#) R&S tag as well.

Managing the IdP R&S entity attribute

The IdP owner is authoritative for the R&S entity attribute. An IdP indicates its willingness and ability to support R&S following steps outlined in [Identity provider - support Research and Scholarship](#).

Further Reading

[The Entity Category SAML Entity Metadata Attribute Type](#) (draft-macedir-entity-attribute-00.xml)

[REFEDS Research and Scholarship entity category specification](#)

[Identity provider - support Research and Scholarship](#)

[Service provider - apply for Research and Scholarship category](#)

[Research and Scholarship FAQ](#)

[Comparing REFEDS and InCommon-only R and S categories](#)