

# Entitlements at UMA.es

first steps into centralised AuthR

Victoriano Giralt

Central ICT Services  
University of Málaga

Cork  
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# Entitlements

a definition



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What's an entitlement?



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What's an entitlement?  
according to Oxford English Dictionary



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What's an entitlement?  
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**entitlement** |en'tɪtlmənt|

noun

the fact of having a right to something : *full **entitlement to** fees and maintenance should be offered | you should be fully aware of your legal entitlements.*

- the amount to which a person has a right : *annual leave entitlement.*



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What's an entitlement?



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What's an entitlement?  
according to the eduPerson specification





# Entitlements

## a definition

What's an entitlement?  
according to the eduPerson specification

**eduPersonEntitlement** URI (either URN or URL)  
that indicates a set of rights to specific resources.



# URNs

how do they look like



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# URNs in Entitlements for AuthR

as it is in use at UMA (by example)



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```
irisUserEntitlement = urn:mace:rediris.es:uma.es:  
entitlement:applAccess:SolicitudGasto:LEVEL
```

Assigns access rights to the designated application:



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irisUserEntitlement = urn:mace:rediris.es:uma.es:  
**entitlement**:applAccess:SolicitudGasto:*LEVEL*

Assigns access rights to the designated application:

- **Function**

entitlement

the URN describes a right for a user or role



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applAccess

kind of right, access to an application in this case.



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Assigns access rights to the designated application:

- **Function**

**SolicitudGasto**

application the right is granted on.





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## *LEVEL*

granted access level, application specific:  
RUG, ROU, RGE



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- Function
- Usage

## LDAP search

The application does a standard directory search to find out if the user that has been authenticated has the right to use it and the access level that has been granted to her.



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## Query via web service

The application queries a web service with user and application identifier as inputs and obtains the access level or the absence of the right to use.



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## WebSSO AuthR assertion

The authentication server has information about the accessed resource, once the user is AuthN'd, retrieves application specific AuthR information from the entitlements in the user's entry in the directory, and passes them onto the resource



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```

- Function
- Usage

## Federation

We insert the appropriate entitlement values into the SAML assertions for the applications, as SPs, to consume.



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- Function
- Usage
- **Advantages**

## Unique authorisation point

All of an object's authorisations,  
both explicit and implicit,  
are centrally kept in a directory entry.



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```

- Function
- Usage
- **Advantages**

## A sole authorisation model

URNs allow us to express all authorisation in a common form, with application specific semantics.



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- Function
- Usage
- Advantages

Agent-Function-Qualifier

*Who can do What on Which object*





# URNs in Entitlements for AuthR

as it is in use at UMA (a *hairier* example)



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```
irisUserEntitlement = urn:mace:rediris.es:uma.es:  
entitlement:applAccessAdmin:rectorado_convenios
```

Assigns permission granting rights in the designated application:



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irisUserEntitlement = urn:mace:rediris.es:uma.es:  
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irisUserEntitlement = urn:mace:rediris.es:uma.es:  
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**applAccessAdmin**

kind of right, application access permission granting in this case.



# URNs in Entitlements for AuthR

as it is in use at UMA (a *hairier* example)

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irisUserEntitlement = urn:mace:rediris.es:uma.es:  
entitlement:applAccessAdmin:rectorado_convenios
```

Assigns permission granting rights in the designated application:

- **Function**

rectorado\_convenios

application the permission can be granted upon.



# Demo time ok?

like or not, it's going to happen



# On URN handling problems

or, more precisely, their absence



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or, more precisely, their absence

URNs usage problems are more perceived than real





# On URN handling problems

or, more precisely, their absence

URNs usage problems are more perceived than real

- Searching for URNs

URN = text string

**When properly indexed,**  
LDAP shines  
for its speed in substring searching;  
regardless of length.  
(We have benchmarks to back this).



# On URN handling problems

or, more precisely, their absence

URNs usage problems are more perceived than real

- Searching for URNs
- Entitlement processing

Entitlement = multivalued attribute

Processing is not more complex than any other multivalued attributes.



# On URN handling problems

or, more precisely, their absence

URNs usage problems are more perceived than real

- Searching for URNs
- Entitlement processing
- **URN processing**

URN = text string

Searching for information inside a URN is just string processing, most programming languages in use can easily accomplish.



# On URN handling problems

or, more precisely, their absence

URNs usage problems are more perceived than real

- Searching for URNs
- Entitlement processing
- URN processing
- **Value control**

## URNReg

A schema and application for registering URN values in a distributed fashion



# URNs

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# Thank you

## Questions?

answers not assured

