OAuth 2.0 Token Exchange

https://tools.ietf.org/html/draft-ietf-oauth-token-exchange-09

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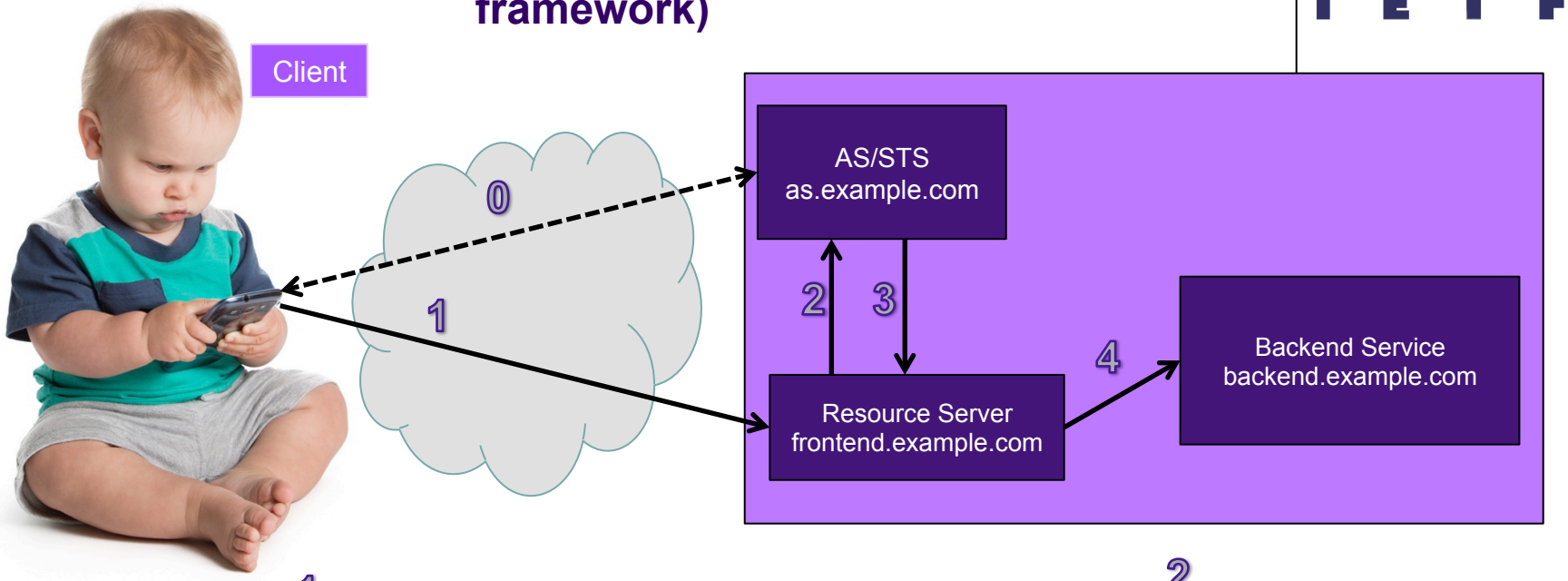
Attempt to Provide Context

(one example of the many use cases of a token exchange framework)



1

```
GET /resource HTTP/1.1
Host: frontend.example.com
Authorization: Bearer accVkjcJyb4BWCxGsndESCJQbdFMogUC5PbRDqceLTC
```

2

```
POST /as/token.oauth2 HTTP/1.1
Host: as.example.com
Authorization: Basic cnMwODpsb25nLXNlY3VyZS1yYW5kb20tc2VjcmV0
Content-Type: application/x-www-form-urlencoded

grant_type=urn%3Aietf%3Aparams%3Aoauth%3Agrant-type%3Atoken-exchange
&resource=https%3A%2F%2Fbackend.example.com%2Fapi%20
&subject_token=accVkjcJyb4BWCxGsndESCJQbdFMogUC5PbRDqceLTC
&subject_token_type=
 urn%3Aietf%3Aparams%3Aoauth%3Atoken-type%3Aaccess_token
```

3

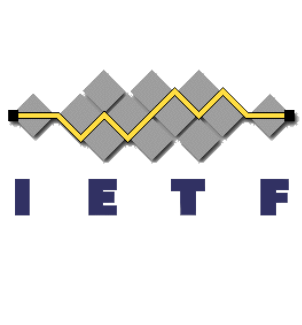
```
HTTP/1.1 200 OK
Content-Type: application/json
Cache-Control: no-cache, no-store

{
 "access_token":"eyJhbGciOiJFUzI1NiIsImtpZCI6IjllciJ9.eyJhdWQiOiJo
   dHRwczovL2JhY2tlbmQuZXhhbXBsZS5jb20iLCJpc3MiOiJodHRwczovL2FzLmV
   4YW1wbGUuY29tIiwiZXhwIjoxNDQxOTE3NTkzLCJpYXQiOjE0NDE5MTc1MzMsIn
   N1YiI6ImJjQGV4YW1wbGUuY29tIiwic2NwIjpbImFwaSJdfQ.MXgnpvPMo0nhce
   PwnQbunD2gw_pDyCFA-Saobl6gyLAdyPbaALFuAOyFc4XTWaPEnHV_LGmXklSTp
   z0yC7hlSQ",
 "issued_token_type":
     "urn:ietf:params:oauth:token-type:access_token",
 "token_type":"Bearer",
 "expires_in":60
}
```

4

```
GET /api HTTP/1.1
Host: backend.example.com
Authorization: Bearer eyJhbGciOiJFUzI1NiIsImtpZCI6IjllciJ9.eyJhdWQ
   iOiJodHRwczovL2JhY2tlbmQuZXhhbXBsZS5jb20iLCJpc3MiOiJodHRwczovL2
   FzLmV4YW1wbGUuY29tIiwiZXhwIjoxNDQxOTE3NTkzLCJpYXQiOjE0NDE5MTc1M
   zMsInN1YiI6ImJjQGV4YW1wbGUuY29tIiwic2NwIjpbImFwaSJdfQ.MXgnpvPMo
   0nhcePwnQbunD2gw_pDyCFA-Saobl6gyLAdyPbaALFuAOyFc4XTWaPEnHV_LGmX
   klSTpz0yC7hlSQ
```

Current Status



- Draft -09 published July 3rd with relatively minor changes addressing *actionable and meaningful* WGLC feedback
  - Changed "security tokens obtained **could** be used in a number of contexts" to "security tokens obtained **may** be used in a number of contexts”
  - Clarified that the validity of the subject or actor token have no impact on the validity of the issued token after the exchange has occurred
  - Changed use of “invalid_target” error code to a SHOULD (from MAY)
  - Clarified text about non-identity claims within the "act" claim being meaningless
  - Added brief Privacy Considerations section

Next Steps

- *humbly request* Transition to "Waiting for Writeup"