## Authorization Test Client → Authorization Test Server

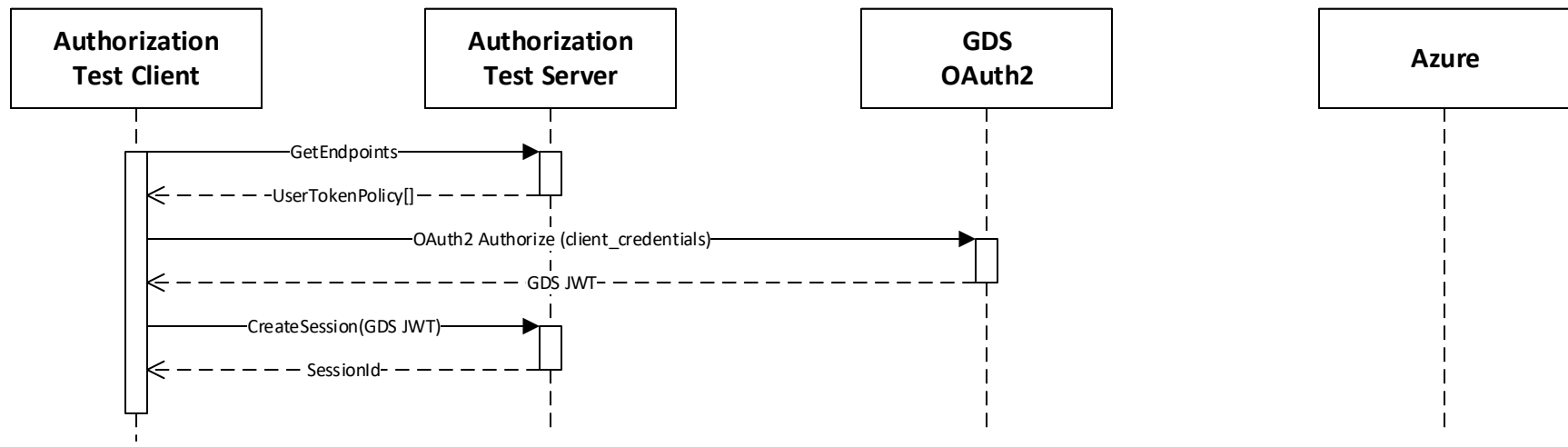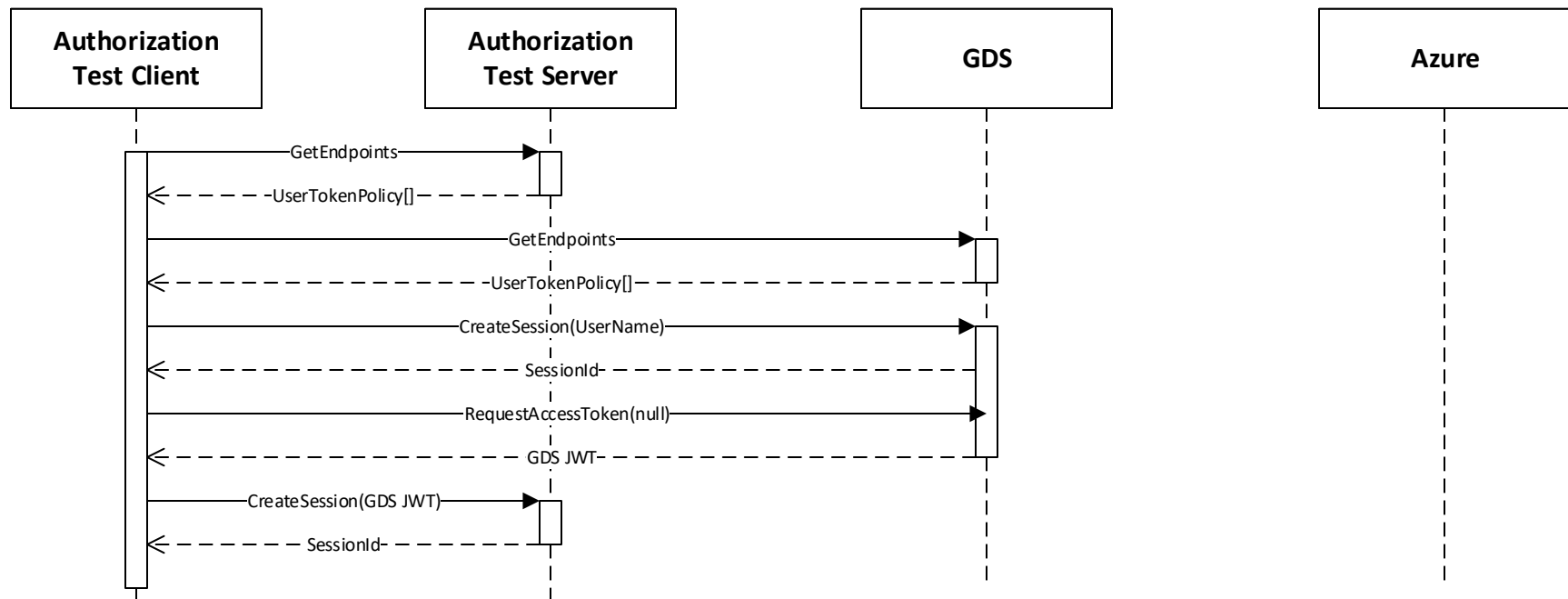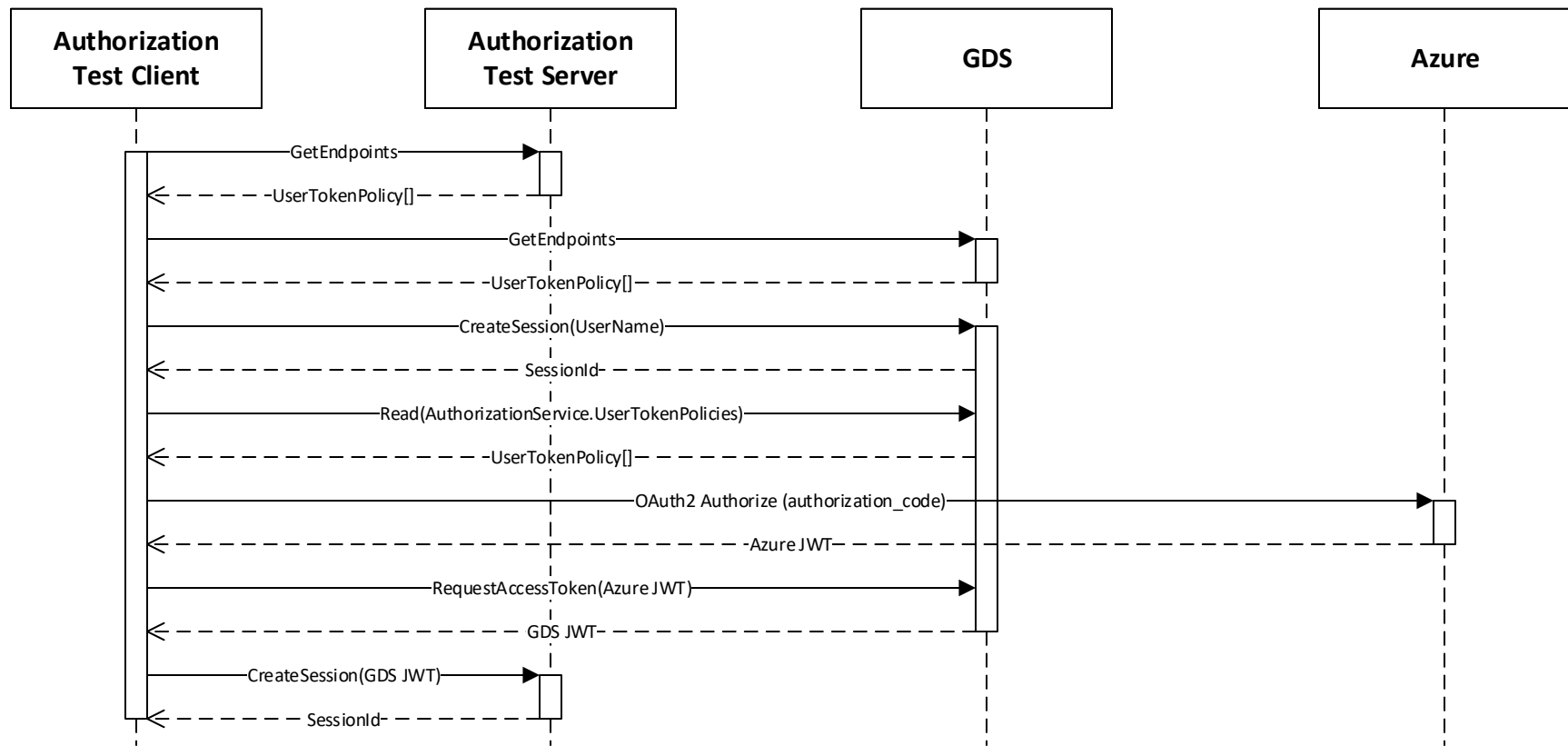| Authorization Test Client | Authorization Test Server | GDS OAuth2 | Azure |
|---|---|---|---|

GetEndpoints →

← UserTokenPolicy[]

CreateSession(Anonymous) →

← SessionId

Simple Authentication: Client selects a policy (anonymous) that allows it to connect directly to the Server.

| Authorization Test Client | Authorization Test Server | GDS OAuth2 | Azure |
|---|---|---|---|

GetEndpoints →

← UserTokenPolicy[]

OAuth2 Authorize (client_credentials) →

← GDS JWT

CreateSession(GDS JWT) →

← SessionId

GDS OAuth2: Client selects a policy that requires a JWT issued by the GDS OAuth2 endpoint.
Client connects to the GDS OAuth2 endpoint and provides credentials supplied out-of-band (in config file).
Client connects to the Server with the GDS JWT.

| Authorization Test Client | Authorization Test Server | GDS | Azure |
|---|---|---|---|

GetEndpoints →

← UserTokenPolicy[]

GetEndpoints →

← UserTokenPolicy[]

CreateSession(UserName) →

← SessionId

RequestAccessToken(null) →

← GDS JWT

CreateSession(GDS JWT) →

← SessionId

GDS JWT: Client selects a policy that requires a JWT issued by the GDS OPC-UA endpoint.
Client connects to the GDS OPC-UA endpoint and provides credentials supplied out-of-band (in config file).
Client requests an JWT from the GDS using the default credentials (null).
Server validates the default credentials and creates a new JWT which is returned to the Client.
Client connects to the Server with the GDS JWT.

```
Authorization          Authorization              GDS                    Azure
Test Client            Test Server

     |--------GetEndpoints-------->|                |                      |
     |<-------UserTokenPolicy[]-----|               |                      |
     |-----------------GetEndpoints----------------->|                     |
     |<----------------UserTokenPolicy[]-------------|                     |
     |----------------CreateSession(UserName)------->|                     |
     |<----------------SessionId---------------------|                     |
     |-------Read(AuthorizationService.UserTokenPolicies)-->|              |
     |<----------------UserTokenPolicy[]-------------|                     |
     |------------------OAuth2 Authorize (authorization_code)------------->|
     |<-----------------Azure JWT-----------------------------------------|
     |----------------RequestAccessToken(Azure JWT)->|                     |
     |<----------------GDS JWT-----------------------|                     |
     |----CreateSession(GDS JWT)-->|                 |                      |
     |<-------SessionId------------|                 |                      |
```

GDS JWT: Client selects a policy that requires a JWT issued by the GDS OPC-UA endpoint.
Client connects to the GDS OPC-UA endpoint and provides credentials supplied out-of-band (in config file).
Client reads the policies supported by the GDS when requesting JWTs.
Client selects a policy that requires an Azure JWT.
Client requests a JWT from Azure using credentials supplied out-of-band (in config file) and information provided by user.
Client requests an JWT from GDS using the Azure JWT.
Server validates the Azure JWT and creates a new JWT which is returned to the Client.
Client connects to the Server with the GDS JWT.