OneHealth DataSpace

CESGA
GALICIA SUPERCOMPUTING CENTER

IBERGRID 2026 · PRACTICAL DEMO

OneHealth DataSpace in practice: one exchange, end to end

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Financiado por la Unión Europea
NextGenerationEU

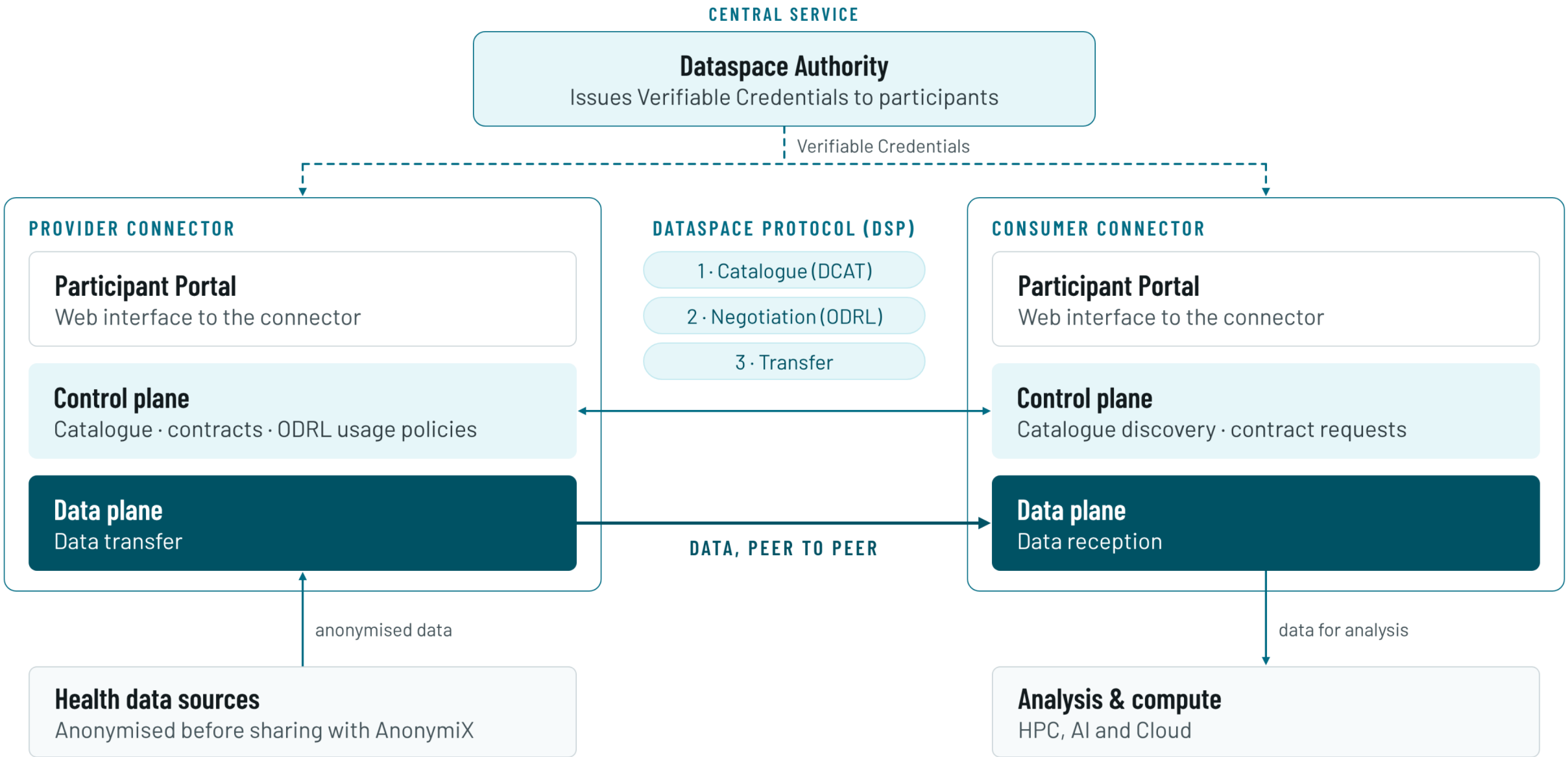
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SECRETARÍA DE ESTADO DE DIGITALIZACIÓN E INTELIGENCIA ARTIFICIAL

Plan de Recuperación, Transformación y Resiliencia

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OneHealth DataSpace architecture



OneHealth DataSpace demo

OneHealth DataSpace

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Step 0

Dataspace Authority
Issues DIDs & Verifiable Credentials

Identity of each connector

CONNECTOR A · PROVIDER

Step 1

Asset
Existing dataset

Policy
Predefined (ODRL)

Contract definition
Links the asset to the policy

Catalogue
New offer published (DCAT)

Catalogue request · DCAT

Contract negotiation · ODRL

Transfer process

DATA, PEER TO PEER

DATASPACE PROTOCOL (DSP)

CONNECTOR B · CONSUMER

Step 2

2.1 Discover the offer in the catalogue

2.2 Open the offer and its policy

2.3 Negotiate the contract

2.4 Start the transfer

2.5 Download and visualise the data

Step 3 NOT EVERY OFFER IS OPEN TO CONNECTOR B

Hidden offer
Access policy not met: it never appears in B's catalogue

Visible, but not accessible
Contract policy not met: the negotiation never concludes

Accessible offer
Both policies met: agreement, transfer and download

STEP 0 · IDENTITY

Every connector has a public DID document


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{
  "id": "did:web:farmaciaalameda.srv.cesga.es:identityhub:did",
  "service": [
    { "type": "ProtocolEndpoint",
      "serviceEndpoint": "https://farmaciaalameda.srv.cesga.es/controlplane/dsp/api/dsp" },
    { "type": "CredentialService",
      "serviceEndpoint": "https://farmaciaalameda.srv.cesga.es/identityhub/credentials/…" } ],
  "verificationMethod": [
    { "id": "did:web:farmaciaalameda.srv.cesga.es:identityhub:did#key-1",
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}
```

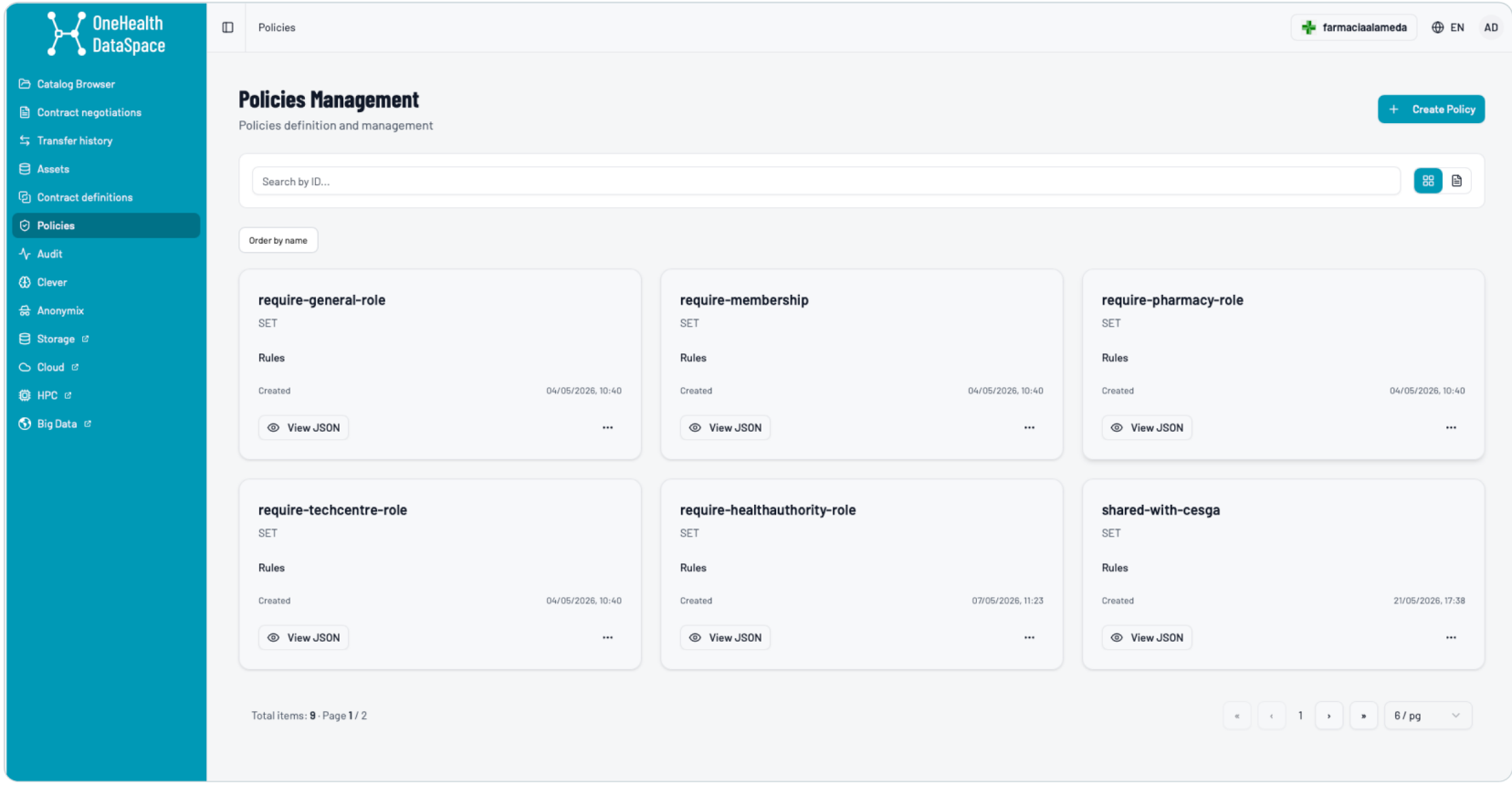
STEP 1 · PROVIDER A

The rules are written as ODRL policies

Farmacia Alameda

require-membership: any participant with a valid membership credential.

cesga-only: only the participant whose credential names CESGA.



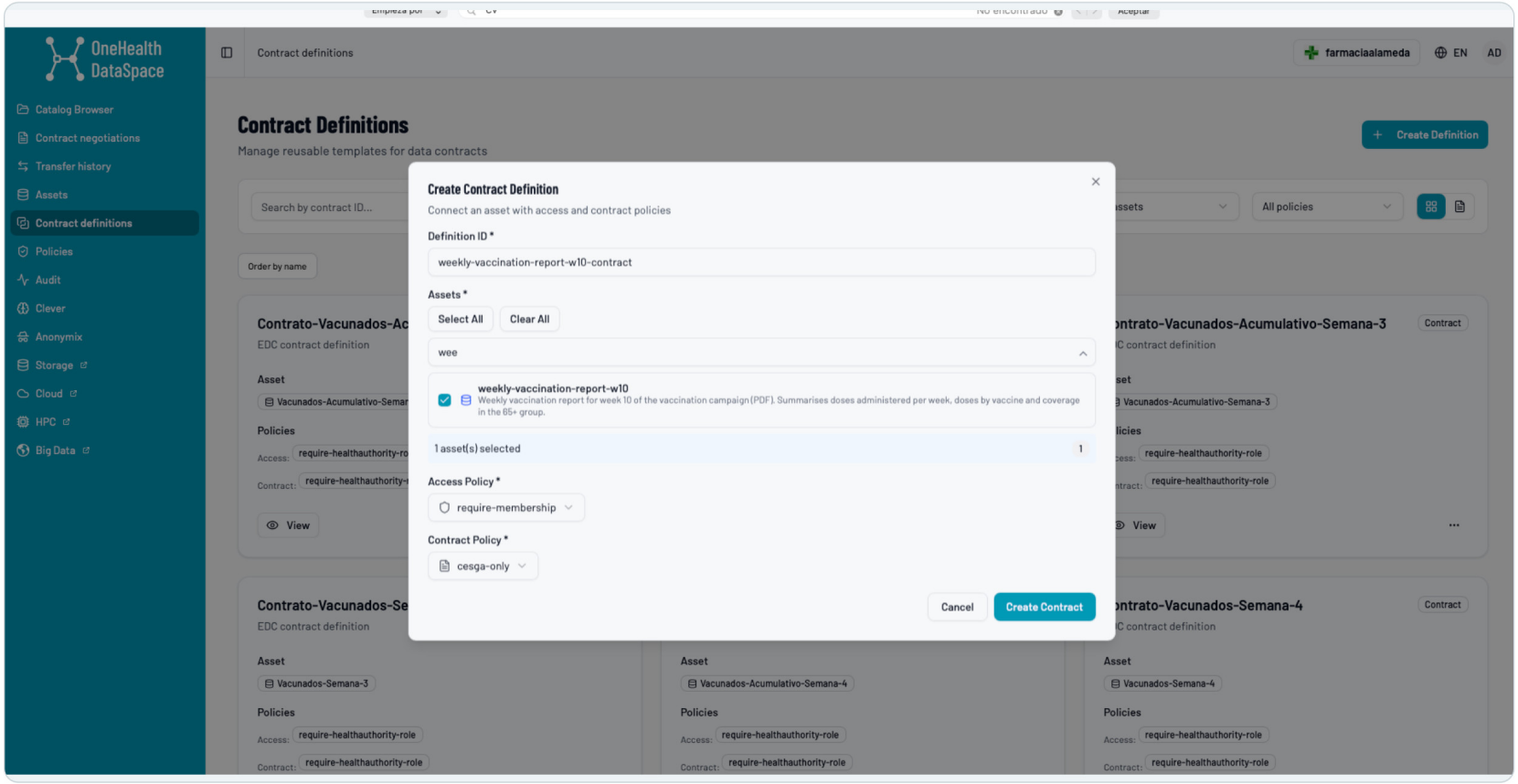
STEP 1 · PROVIDER A

A contract definition publishes the offer

Farmacia Alameda

Access policy: require-membership. Who can see the offer.

Contract policy: cesga-only. Who can sign for it.



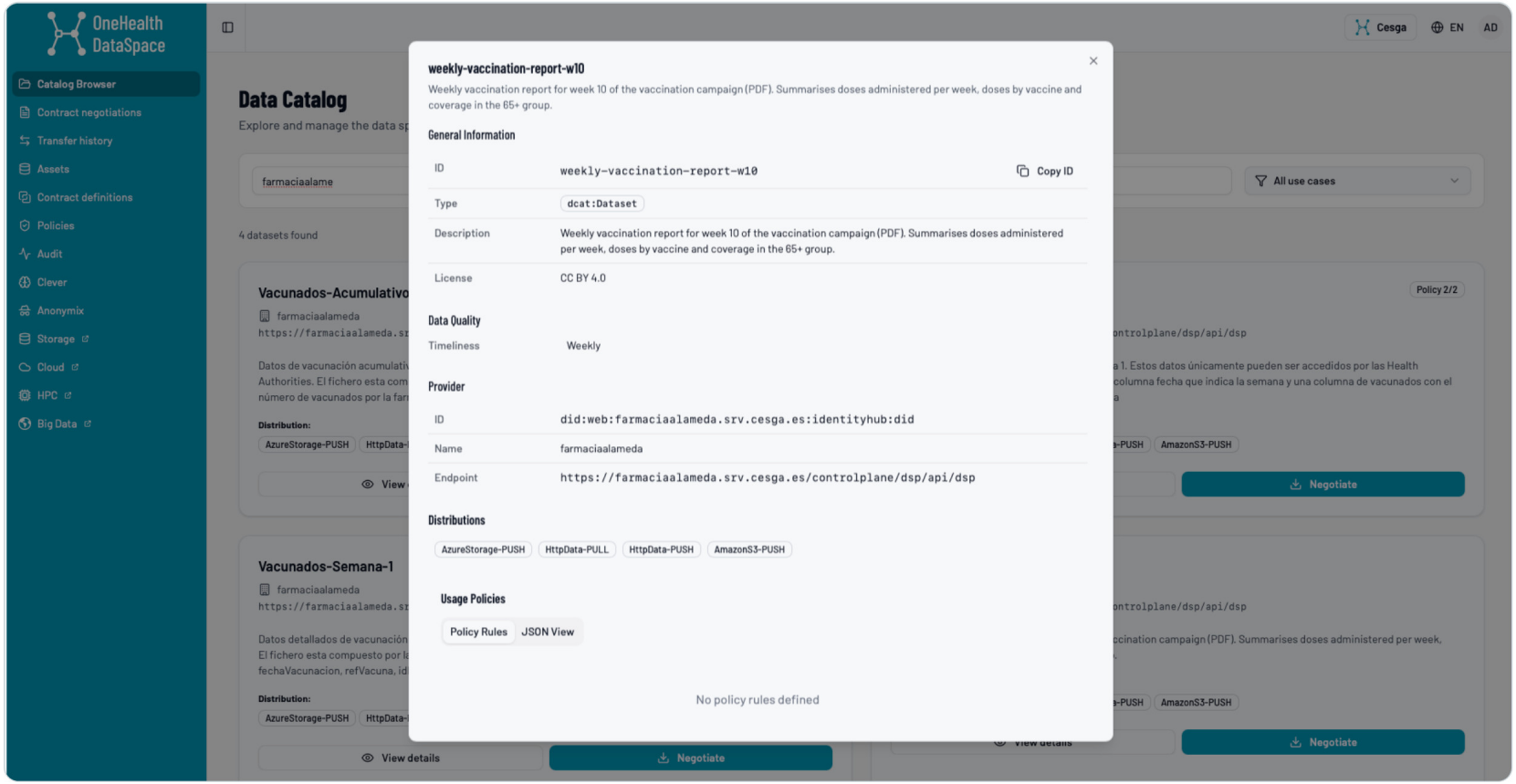
STEP 2 · CONSUMER B

The offer appears in B's catalogue

CESGA

A DCAT dataset: description, licence, provider DID and distributions.

B knows what exists and on what terms. It has no data yet.



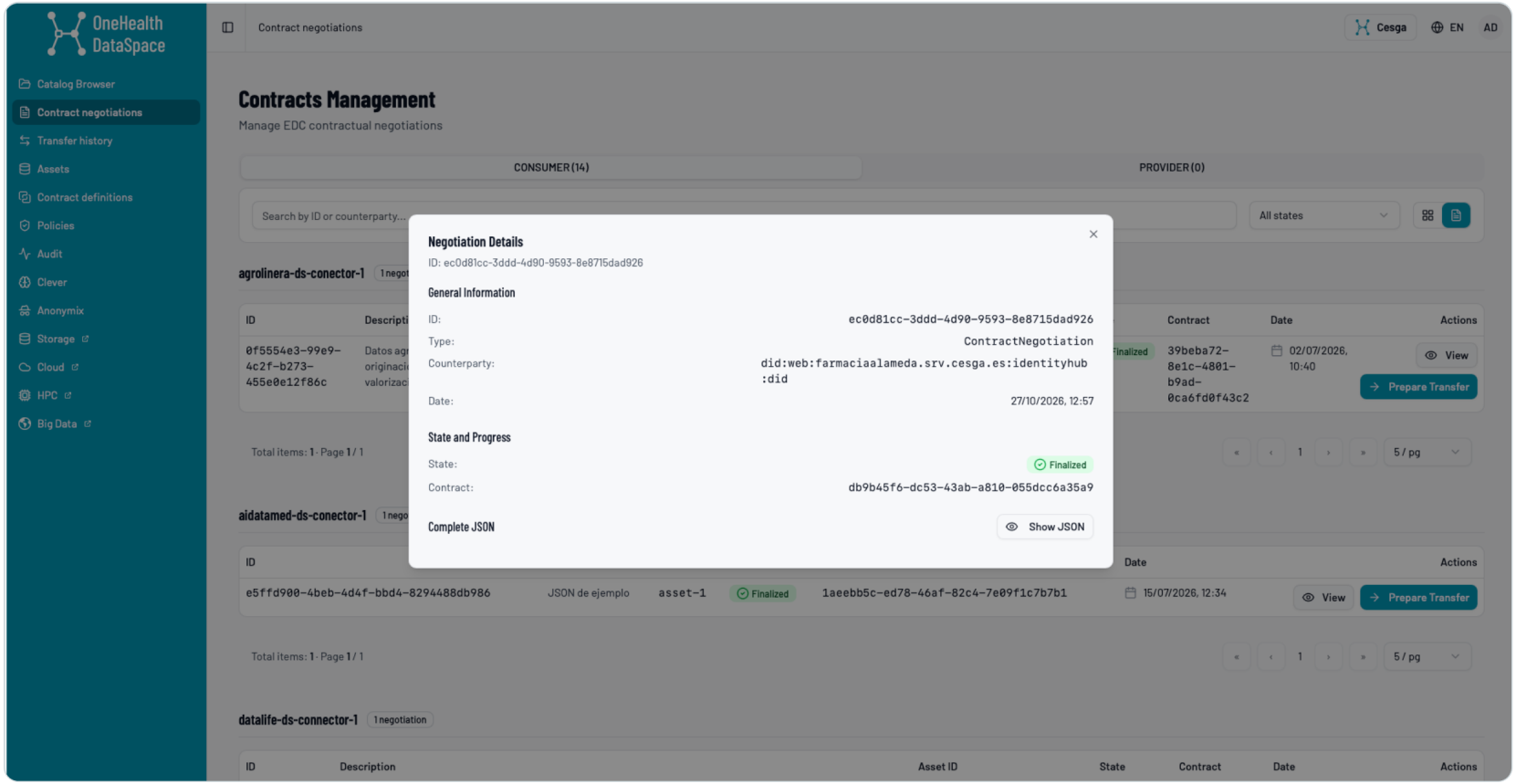
STEP 2 · CONSUMER B

The negotiation is finalised over DSP

CESGA

A checks B's credential against the contract policy.

State **Finalized**, with a contract ID on both sides.



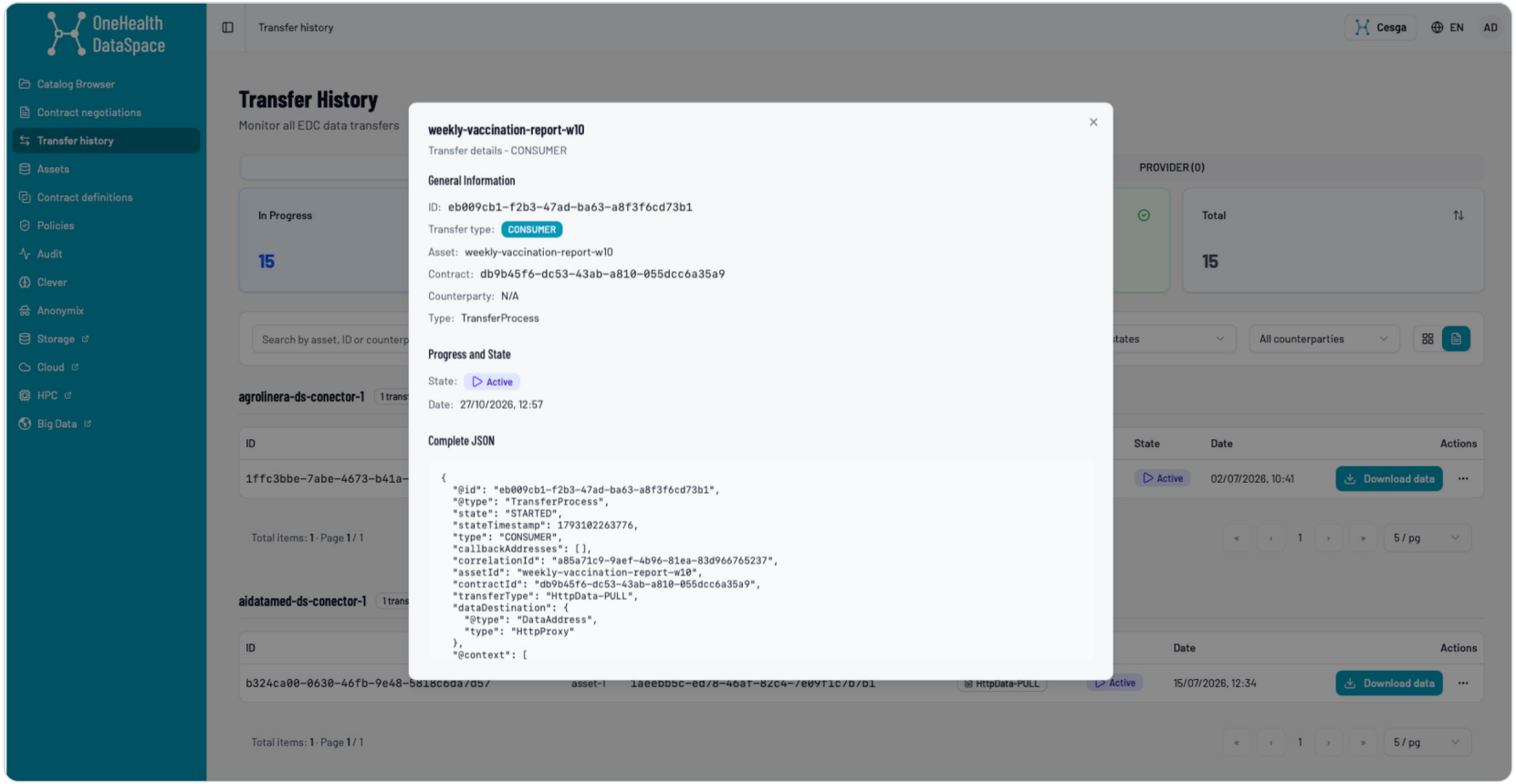
STEP 2 · CONSUMER B

The transfer starts on the data plane

CESGA

Started from the agreement, as an HTTP pull.

State **Active**: access has been granted.



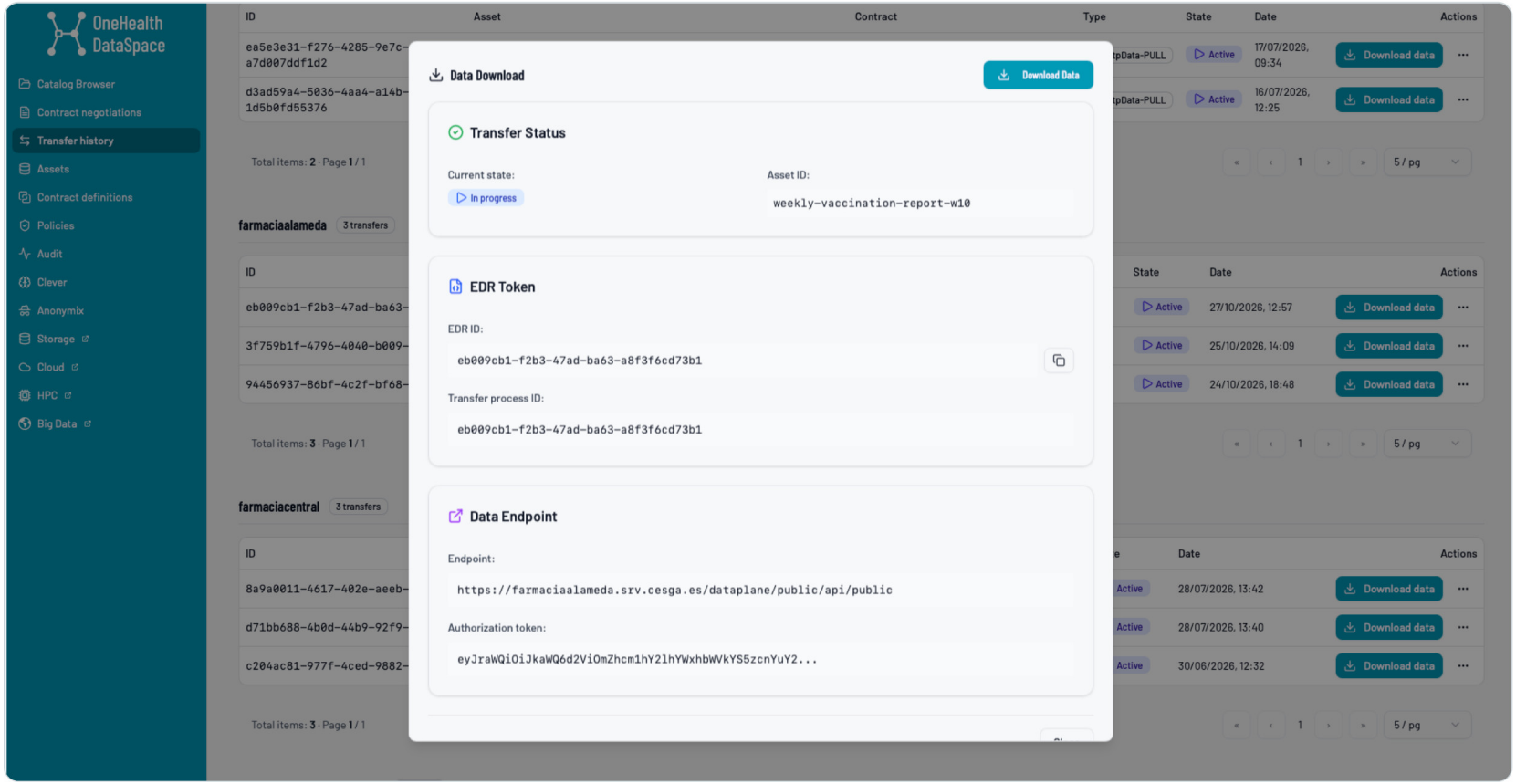
STEP 2 · CONSUMER B

B downloads the data straight from A

CESGA

The endpoint is A's data plane, opened with a short-lived token.

No intermediary holds the file.



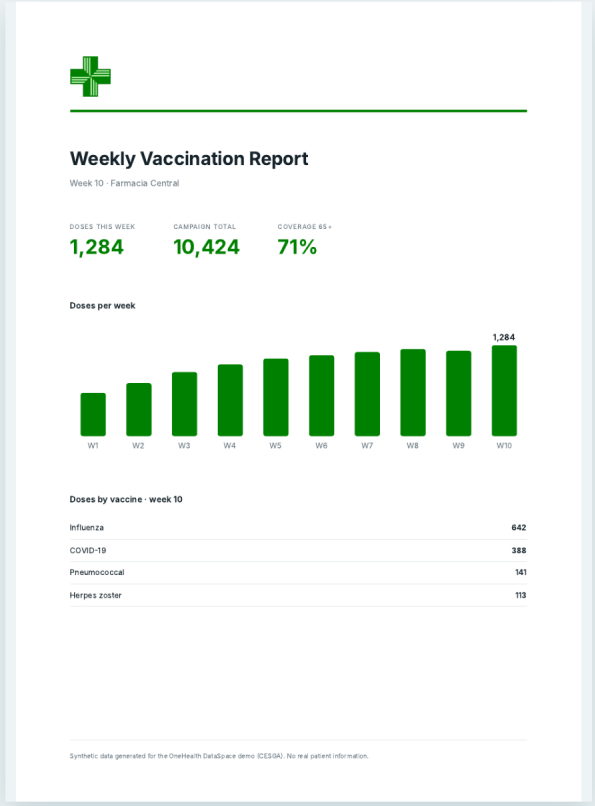
STEP 2 · CONSUMER B

And here is the data

CESGA

The shared asset: a weekly vaccination report, as a PDF.

Synthetic data, made for this demo.



Weekly Vaccination Report

Week 10 · Farmacia Central

DOSES THIS WEEK	CAMPAIGN TOTAL	COVERAGE 65+
1,284	10,424	71%

Doses per week

Doses by vaccine · week 10

Influenza	642
COVID-19	388
Pneumococcal	141
Herpes zoster	113

Synthetic data generated for the OneHealth DataSpace demo (CESGA). No real patient information.

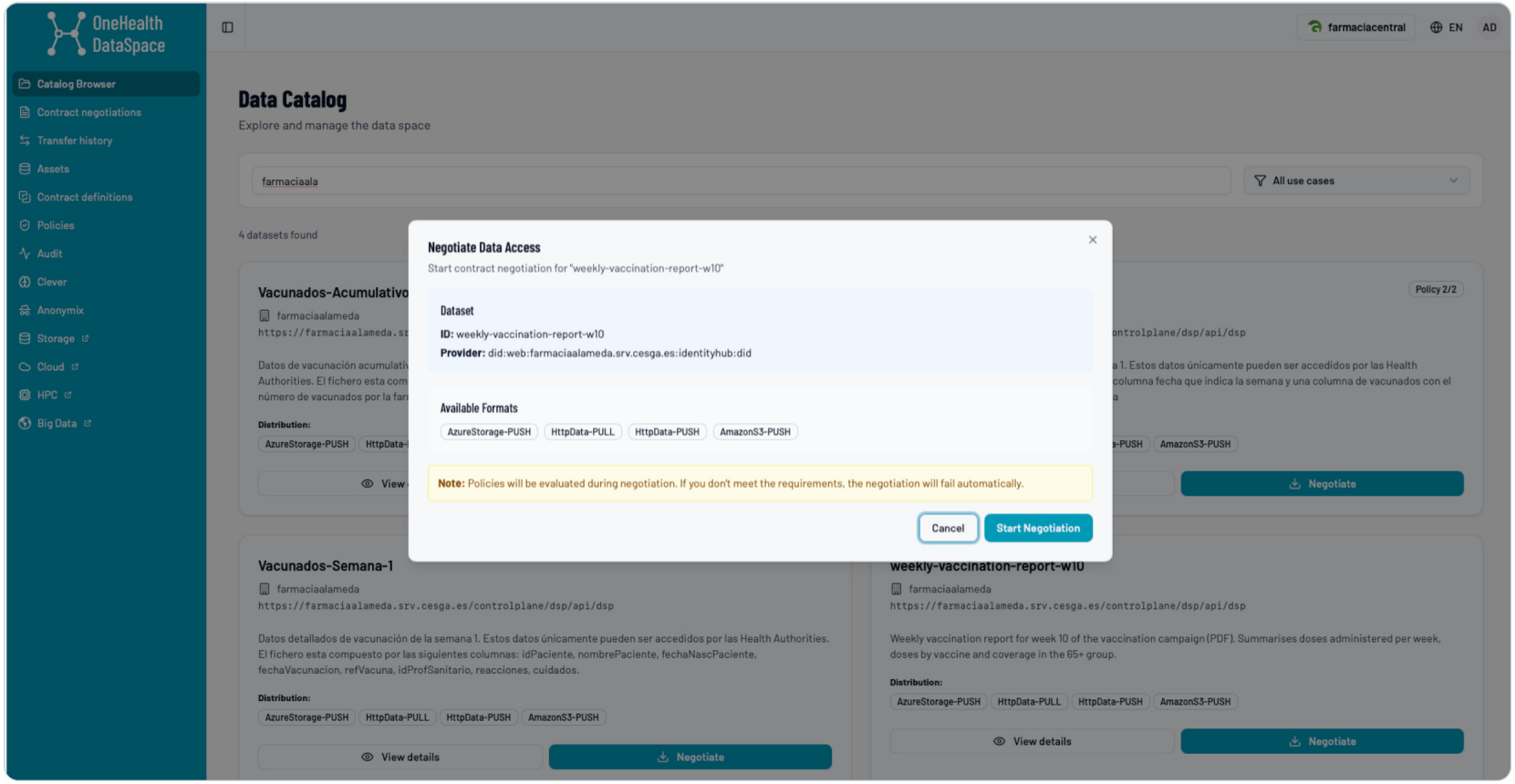
STEP 3 · NOT EVERY OFFER IS OPEN

Farmacia Central can see the offer…

Farmacia Central

It is a member, so the access policy lets it discover the report.

It tries to negotiate anyway.



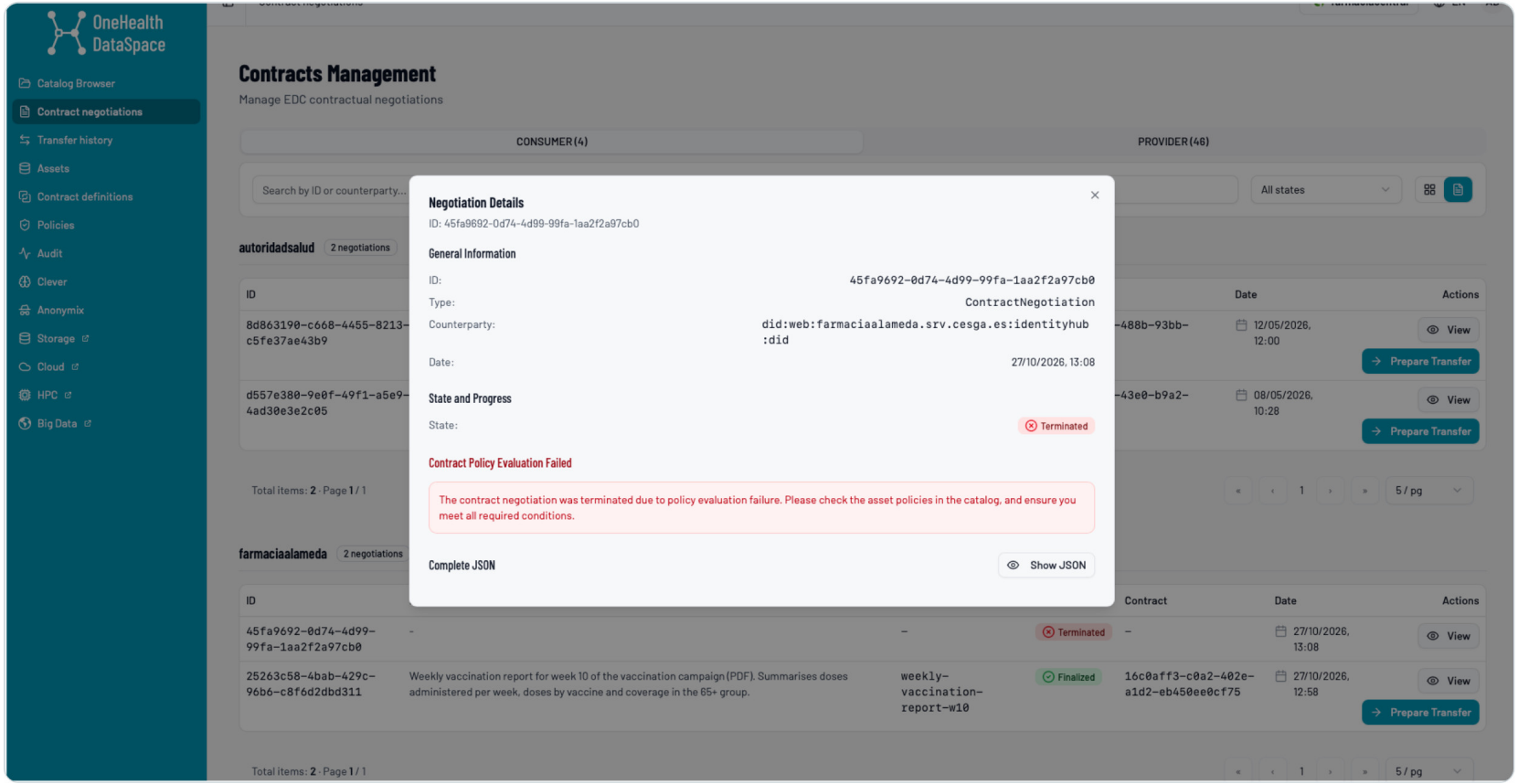
STEP 3 · NOT EVERY OFFER IS OPEN

...but cannot sign for it

Terminated

Its credential does not meet **cesga-only**.

No agreement, no transfer. A's connector decided, with A's rules.



WRAP-UP

Every level has a concrete mechanism

Level	Mechanism	Where we saw it
Connector-to-connector interaction	Dataspace Protocol (DSP)	Negotiations and the transfer
Describing and discovering data	DCAT catalogues	The offer in CESGA's catalogue
Trust between participants	Verifiable Credentials	Credentials checked in each negotiation
Conditions of access and use	ODRL access and contract policies	Farmacia Central's terminated negotiation

OneHealth DataSpace

Thank you.

Questions are welcome.

Fundación CESGA · Santiago de Compostela

dataspace.cesga.es