TSG – Analytics Data Plane

Dataspace based analysis support

General purpose Dataspace technology

- *SSI Wallet*
  (W3C Verifiable Credentials, OpenID 4 Verifiable Credentials, Decentralized Claims protocol)
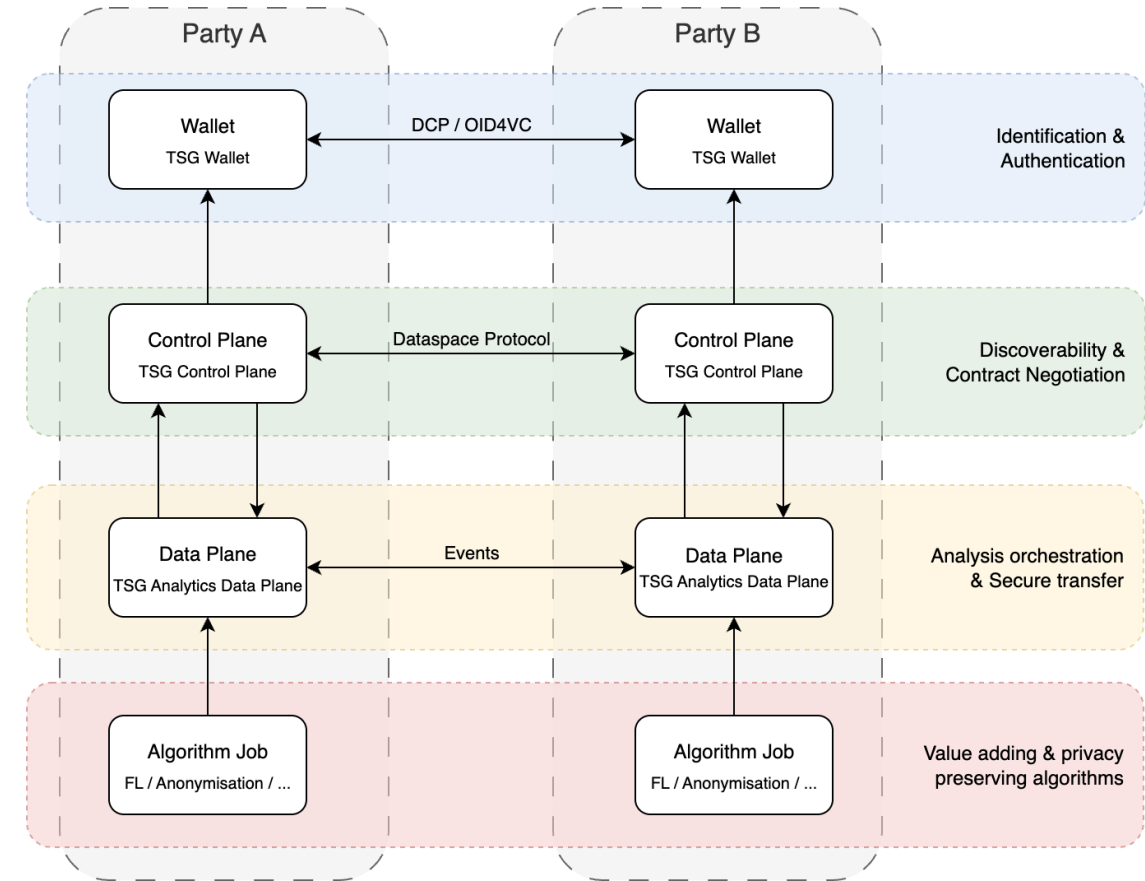
- *Control Plane*
  (Eclipse Dataspace Protocol)

Event based collaborative analysis

- *Analytics data plane*
  Orchestration & transfer of events
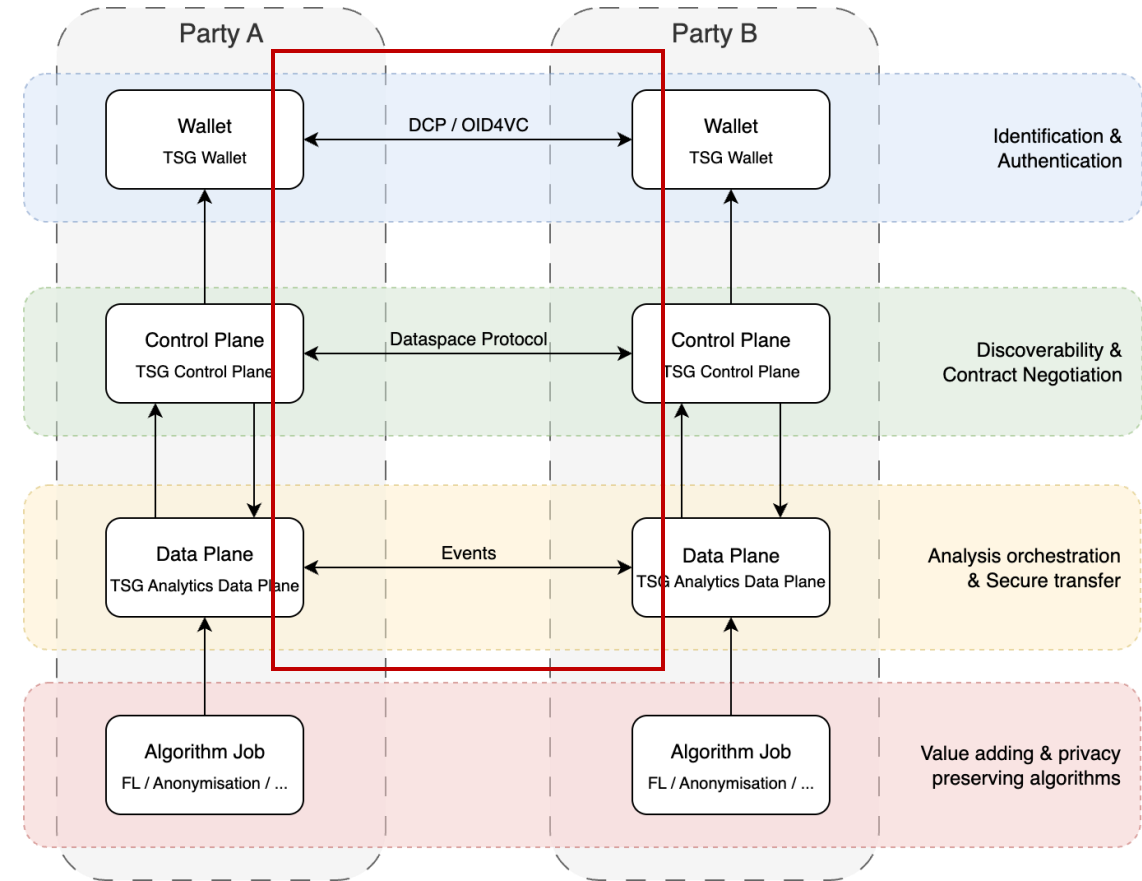
- *Algorithm jobs*
  Execution of algorithms

Party A | Party B

Wallet — TSG Wallet — DCP / OID4VC — Wallet — TSG Wallet — Identification & Authentication

Control Plane — TSG Control Plane — Dataspace Protocol — Control Plane — TSG Control Plane — Discoverability & Contract Negotiation

Data Plane — TSG Analytics Data Plane — Events — Data Plane — TSG Analytics Data Plane — Analysis orchestration & Secure transfer

Algorithm Job — FL / Anonymisation / ... — Algorithm Job — FL / Anonymisation / ... — Value adding & privacy preserving algorithms

HEALTH

Communication

Relies by default strongly on servers

- *DID method defaults to did:web*
  (a) Placing wallet outside firewall
  (b) Investigating whether a did:key variant might work

- *Dataspace Protocol default binding relies on HTTP callbacks*
  (a) Placing control plane outside firewall
  (b) Custom protocol binding created to handle callbacks via an outbox

Analysis

Algorithm job runs with HTTP-client only

Example Algorithm created using Tensorflow/Keras

- Configurable via JSON-serialized Keras model/optimizer