DSaaS: Flux Federation

Last Updated: 18 December 2026

See What's Changed

This Schedule outlines the functional requirements for Data Store as a Service for Flux Federation (DSaaS:Flux) 1.8.0.

1. Definitions and Interpretations

1.1 This Schedule forms part of the Master Services Agreement between Biza and the Client (**MSA**) or the Consolidated Services Agreement (**CSA**), whichever applies. Terms defined in the MSA or the CSA have the same meaning when used in this Schedule.

1.2 This Schedule sets out the functional requirements of Data Store as a Service for Flux Federation (DSaaS:Flux) as provided to the Client under a Statement of Work or other ordering document issued under the MSA, or an Order Form issued under the CSA (**SOW**). The components, editions and add-ons of DSaaS:Flux that the Client receives are those set out in the applicable SOW.

1.3 If this Schedule is inconsistent with the MSA, the CSA or a SOW, the order of precedence set out in the MSA or the CSA, as applicable, applies.

1.4 The following additional definitions apply:

Biza Guides
: refers to the technical documentation hosted at https://guides.biza.io

Biza ID
: refers to Biza's identity service, as described within Biza ID

Brand
: refers to a Client brand served by DSaaS:Flux. Each Brand is configured with a brand identifier, a FRMP identifier and a HaaS customer identifier

CDR Rules
: refers to the Competition and Consumer (Consumer Data Right) Rules 2020, published and updated from time to time at https://www.legislation.gov.au/F2020L00094/latest/text

CSA
: has the meaning given in clause 1.1, being the Consolidated Services Agreement published in Biza Guides

Data Adapter Specification
: refers to version 2.3.0 of the HaaS source system connectivity specification, available at https://guides.biza.io/redocusaurus/haas-adapter-2_3_0.yaml. The current version of the specification is published at https://guides.biza.io/haas/developer-resources/specifications/adapter

Data Mappings
: refers to a set of rules that describe an alignment from the Flux API to the Data Adapter Specification

Data Standards
: refers to the Consumer Data Standards published at https://consumerdatastandardsaustralia.github.io/standards

DSaaS:Admin
: refers to the web based administration interface of DSaaS:Flux

Flux API
: refers to the published Flux Federation billing system API of the Client's Flux Federation tenancy

Hosting Schedule
: refers to the DSaaS: Flux Federation Hosting functional requirements, under which Biza hosts DSaaS:Flux

MSA

has the meaning given in clause 1.1

Principal

refers to a Consumer whose data is being collected and shared by DSaaS:Flux via the Data Adapter API

SOW

has the meaning given in clause 1.2, and includes any other ordering document issued under the MSA, and any Order Form issued under the CSA, for DSaaS:Flux

Space

refers to one Biza-managed deployment of DSaaS:Flux for one Client environment, as set out in the Hosting Schedule

2. Preamble

The Holder as a Service environment provides a turnkey solution for delivering the Consumer Data Right requirements for mandated Data Holders. To make this functionality available, Biza requires the Client to deliver a set of compatible endpoints referred to as the *Data Adapter*.

DSaaS:Flux is the Data Adapter for Clients whose energy billing platform is Flux Federation: it collects Consumer Data from the *Flux API*, translates it to the *Data Adapter Specification* using the *Data Mappings*, holds it in a cache, and serves it to HaaS: Platform.

Biza hosts and operates DSaaS:Flux under the *Hosting Schedule*. The Client does not install, host or upgrade it.

3. Functional Requirements

The following requirements apply for the delivery of DSaaS:Flux.

Requirement identifiers are stable and are not reused. Gaps in numbering are intentional.

3.1 Data Adapter API

DSaaS:Flux **MUST** deliver the following Energy sector Data Adapter endpoints in accordance with the *Data Adapter Specification* version 2.3.0, at the versions shown:

Functional Requirement	Sectors	Category	Requirement	Versions
FA1	Energy	Data Adapter API	Get Endpoint Meta	Response V3, V4 and V5
FA2	Energy	Data Adapter API	Get Service Health Status	Response V0
FA3	Energy	Data Adapter API	Get Customer	Response V0
FA4	Energy	Data Adapter API	Get User	Request V0, response V1
FA5	Energy	Data Adapter API	Get Username Attributes	Request V0, response V0
FA6	Energy	Data Adapter API	Get User Principals	Request V0, response V0
FA7	Energy	Data Adapter API	Get Closed Principals	Response V0

Functional Requirement	Sectors	Category	Requirement	Versions
FA8	Energy	Data Adapter API	List Energy Accounts	Response V1
FA9	Energy	Data Adapter API	Get Energy Account Agreed Payment Schedule	Response V0
FA10	Energy	Data Adapter API	List Energy Account Concessions	Response V0
FA11	Energy	Data Adapter API	List Energy Account Balances	Response V0
FA12	Energy	Data Adapter API	List Energy Account Invoices	Response V0
FA13	Energy	Data Adapter API	List Energy Account Billing Transactions	Response V1
FA14	Energy	Data Adapter API	Retrieve FRMP Details	Request V0, response V0
FA15	Energy	Data Adapter API	Get User Notification Information	Request V0, response V0
FA16	Energy	Data Adapter API	Upsert Grant State, through which HaaS: Platform notifies DSaaS:Flux of CDR Data Sharing Arrangement changes	Not versioned

The Data Adapter API **MUST** also apply the following rules:

Functional Requirement	Sectors	Category	Requirement
FA17	Energy	Adapter rules	Get Endpoint Meta **MUST** answer with the highest version it supports that does not exceed the requested `x-haas-max-v`. It **MUST** answer HTTP 400 when that value is malformed or lower than V3.
FA18	Energy	Adapter rules	Every request **MUST** carry an OAuth 2.0 bearer token issued by the Space's configured issuer, with the Data Adapter's own URL as its audience. A missing or invalid token **MUST** be refused.
FA19	Energy	Adapter rules	Every request **MUST** name, in `x-haas-realm-name`, one of the two HaaS realms of a configured Brand (`<haasCustomerId>-auth` or `<haasCustomerId>-dashboard-auth`). Any other realm **MUST** be refused with HTTP 400.
FA20	Energy	Adapter rules	The `x-fapi-interaction-id` request header **MUST** be returned on the response, and one **MUST** be generated when the request has none.
FA21	Energy	Adapter rules	List Energy Account Invoices and List Energy Account Billing Transactions **MUST** be paginated, with a default page of 1 and a default page size of 25.
FA22	Energy	Adapter rules	When no oldest date is requested, List Energy Account Invoices **MUST** start 24 months before the newest date (or today), and List Energy Account Billing Transactions **MUST** start 12 months before the newest time (or now). An oldest value later than the newest value **MUST** be refused with HTTP 400.
FA23	Energy	Adapter rules	Invoices and billing transactions older than two years **MUST NOT** be served: the oldest date or time served is clamped to two years before today.

Functional Requirement	Sectors	Category	Requirement
FA24	Energy	Adapter rules	List Energy Accounts **MUST** omit plans that ended more than two years ago.
FA25	Energy	Adapter rules	List Energy Accounts **MUST** omit an account that has no plan, or no plan with an NMI service point.
FA26	Energy	Adapter rules	Retrieve FRMP Details **MUST** report each NMI of the Principal's supply agreements, with the supply dates and the Brand's configured FRMP identifier. FRMP details **MUST** only be collected for a Principal who has consented to an electricity service point, DER or usage scope.
FA27	Energy	Adapter rules	An invoice's service points **MUST** be resolved from every supply agreement of the account, whatever its status, so a historical invoice **MAY** name a connection that is no longer supplying.

3.2 Consumer Eligibility and Authentication

DSaaS:Flux **MUST** enforce the eligibility criteria for CDR Consumers in the Energy sector as follows:

Functional Requirement	Sectors	Category	Requirement
FE1	Energy	Authentication	A Consumer's username **MUST** be the email address of their Flux person party. Get Username Attributes **MUST** succeed only when exactly one person party of the Brand matches that email address, ignoring case.
FE2	Energy	Authentication	Get Username Attributes **MUST** return an email one-time password method, with the username as the preferred email address, for Biza Managed Consumer authentication.
FE3	Energy	Eligibility	A person **MUST** be 18 years or older by the birth date held in Flux to be eligible, and a person with no birth date **MUST** be treated as ineligible. An organisation **MUST** pass the age check.
FE4	Energy	Eligibility	A Flux data-sharing block of type call centre **MUST** be reported as a Call Centre Block, and one of type legal as a Legal Block. Get User **MUST** answer HTTP 451 for a Principal with a Legal Block, a Call Centre Block or another ineligibility.
FE5	Energy	Eligibility	A Flux data-sharing block of type vulnerable **MUST** be passed to HaaS: Platform as the Principal's vulnerable flag, and **MUST NOT** by itself make the Principal ineligible.
FE6	Energy	Eligibility	A Principal **MUST** have at least one open electricity or dual fuel account, with a plan and an NMI service point, to be shown in the consent flow.
FE7	Energy	Eligibility	An account **MUST** only be shared through supply agreements that are not Inbound and have a start date. An account **MUST** be open when any of its dated supply agreements is open, and closed otherwise.
FE8	Energy	Eligibility	An account's customers **MUST** be drawn only from its Owner, Administrator and Authorised Person parties who have an email address and a birth date and are 18 years or older.
FE9	Energy	Eligibility	Data collection for a Principal **MUST** stop once the Principal is found to be blocked or ineligible.

3.3 Flux Federation Integration

DSaaS:Flux **MUST** deliver software packaging and support for Flux API connectivity (F1), and the Data Mappings between the Flux API and the Data Adapter Specification for the purpose of fulfilling the Data Adapter functional requirements (F2). Biza **MUST** maintain and upgrade the Data Mappings (F3). DSaaS:Flux makes the following Flux API calls, each a `GET` relative to the configured Flux API base path:

Functional Requirement	Sectors	Category	Flux API call	Data it feeds
FX1	Energy	Flux API	`v1/parties/{partyId}`	Get User and Get User Notification Information (name and email), Get Customer, and the age and data-sharing block checks
FX2	Energy	Flux API	`accounts?email=…&fullAccountsOnly=true`	Get Username Attributes, Get User Principals, the consent flow account list, Get Customer and Get Closed Principals
FX3	Energy	Flux API	`v1/supply_agreements?supplyAgreementUuid=…&archivedPlans=true`	Plans and NMIs for List Energy Accounts, and the account eligibility check behind every account-level endpoint

Functional Requirement	Sectors	Category	Flux API call	Data it feeds
FX4	Energy	Flux API	`accounts/{accountUuid}`	List Energy Accounts, Get Customer addresses, List Energy Account Balances, payment schedules, account closure for Get Closed Principals, and the supply agreements behind Retrieve FRMP Details and invoice service points
FX5	Energy	Flux API	`v1/account/{accountUuid}/social_obligations_entitlements`	List Energy Account Concessions
FX6	Energy	Flux API	`v1/account/{accountId}/payment_sources?preferred=true`	Get Energy Account Agreed Payment Schedule, for card and direct debit payment sources
FX7	Energy	Flux API	`v1/{accountId}/payment_schedules`	Get Energy Account Agreed Payment Schedule
FX8	Energy	Flux API	`v1/plan_details?consumerPlanUuid=…`	Plan details in List Energy Accounts
FX9	Energy	Flux API	`v1/consumer_plans/{consumerPlanUuid}/pricing_details`	Tariffs in List Energy Accounts

Functional Requirement	Sectors	Category	Flux API call	Data it feeds
FX10	Energy	Flux API	`accounts/{accountUuid}/account_parties`	Account customers in List Energy Accounts and the consent flow
FX11	Energy	Flux API	`invoicing/transactions`	List Energy Account Billing Transactions, and the line items of List Energy Account Invoices
FX12	Energy	Flux API	`invoicing/statements`	List Energy Account Invoices

The Flux API integration **MUST** also apply the following rules:

Functional Requirement	Sectors	Category	Requirement
FX13	Energy	Flux API	DSaaS:Flux **MUST** authenticate to the Flux API with an OAuth 2.0 client credentials grant at the configured token URI, requesting the configured scopes.
FX14	Energy	Flux API	DSaaS:Flux **MUST** discard Flux parties whose brand differs from the requested Brand, and parties with no accounts.
FX15	Energy	Flux API	DSaaS:Flux **MUST** request billing statements and transactions in pages of at most 200 records.
FX16	Energy	Flux API	DSaaS:Flux **MUST** first collect a Principal's billing history over 25 months: the two-year shareable period plus one month.

3.4 Caching and Data Retention

DSaaS:Flux holds Consumer Data in a cache and serves the Data Adapter API from it, as follows. The data store requirements FC1 to FC3 are in the Hosting Schedule.

Functional Requirement	Sectors	Category	Requirement
FC4	Energy	Freshness	A Flux API response **MUST** be treated as fresh for 4 hours.
FC5	Energy	Freshness	A cached data point **MUST** become stale after its staleness offset: 1 hour for user, customer, FRMP, concession, balance, account detail and payment schedule data; 2 hours for billing transactions; and 8 hours for invoices and Principal metadata. The offset **MUST** run from collection for billing data, and from the earliest freshness expiry of the Flux responses used for other data.

Functional Requirement	Sectors	Category	Requirement
FC6	Energy	Freshness	DSaaS:Flux **MUST** check every 15 minutes, for each Brand, every cached Principal and every expiring user, and **MUST** refresh each data point that is unfilled or due to expire within half its staleness offset.
FC7	Energy	Freshness	A data point that has expired **MUST** still be served while it is being refreshed.
FC8	Energy	Retention	When a Principal's last subscription ends, DSaaS:Flux **MUST** delete the Principal's cached record and remove the Principal from its users' records.
FC9	Energy	Retention	When billing consent is withdrawn for an account, that account's cached invoices and billing transactions **MUST** be deleted.
FC10	Energy	Retention	Every hour, DSaaS:Flux **MUST** mark as expired each active CDR Data Sharing Arrangement whose expiry passed more than 2 hours earlier, so that its data is removed as in FC8 and FC9.

3.5 Subscription and Consent Handling

DSaaS:Flux collects Consumer Data only for established and in-progress CDR Data Sharing Arrangements, as follows:

Functional Requirement	Sectors	Category	Requirement
FS1	Energy	Consent	Upsert Grant State **MUST** record the Active, Revoked and Expired states of a CDR Data Sharing Arrangement, with its scopes, accounts, Software Product, creation and expiry, and **MUST** ignore the Initialise state. Any other grant type **MUST** be answered HTTP 501.
FS2	Energy	Consent	DSaaS:Flux **MUST** hold one subscription per Brand, user and Principal, which is active while any of its CDR Data Sharing Arrangements is active. Only active arrangements **MUST** contribute scopes.
FS3	Energy	Consent	DSaaS:Flux **MUST** collect only the data of the consented scopes: customer scopes give customer data; energy account scopes give account details; the concessions, payment schedule and billing scopes give that data; and the electricity service point, DER and usage scopes give account details and FRMP details. Every arrangement **MUST** also give the Principal's user and customer data.
FS4	Energy	Consent	When Get User Principals is called, DSaaS:Flux **MUST** open a 10 minute arrangement, with the energy account list scope only, for each Principal returned and each entity the user has authority to operate for, so that the consent flow can show their accounts.
FS5	Energy	Consent	Arrangement changes **MUST** be processed one at a time, in order. A change that arrives out of order **MUST** be retried 5 times at 1 second intervals, and a change that fails twice **MUST** be set aside on a dead-letter queue.
FS6	Energy	Consent	A change that has already been processed **MUST NOT** be processed again when it is redelivered.
FS7	Energy	Consent	When every eligible account of a Principal is closed in Flux, Get Closed Principals **MUST** report the Principal with the time the closure was first seen.

3.6 DSaaS:Admin

DSaaS:Flux **MUST** provide DSaaS:Admin, a web based interface for the administrative management of DSaaS:Flux, as follows:

Functional Requirement	Sectors	Category	Requirement
FD1	Energy	DSaaS:Admin	DSaaS:Admin **MUST** be available at `admin.<base domain>` and **MUST** require single sign-on through the Space's configured OpenID Connect issuer, as outlined within Biza ID, using PKCE. A session **MUST** last at most 30 minutes.
FD2	Energy	DSaaS:Admin	DSaaS:Admin **MUST** list the Space's Brands and, for each Brand, the Principals that have CDR Data Sharing Arrangements associated with DSaaS:Flux, with when they were first created and when they last expire.
FD3	Energy	DSaaS:Admin	DSaaS:Admin **MUST** show, for a Principal, its data-sharing status, subscriptions, consented scopes, related users and missing accounts, and the status (unconsented, unfilled, stale or fresh) and any mapping or fetch failures of each data point.
FD4	Energy	DSaaS:Admin	DSaaS:Admin **MUST** let a user instruct DSaaS:Flux to refetch a Principal's Consumer Data from the Flux API. When the Principal has no active subscription, a refetch **MUST** instead delete the Principal's cached data.
FD5	Energy	DSaaS:Admin	DSaaS:Admin **MUST** emit a SIEM event for each sign-in, sign-out, listing of Principals, view of a Principal, refetch and health check.

3.7 SIEM and Log Events

DSaaS:Flux **MUST** record the following events:

Functional Requirement	Sectors	Category	Requirement
FL1	Energy	SIEM	Each SIEM event **MUST** be written as a log line prefixed `@BIZA.SIEM.EVENT@`, followed by a JSON object carrying the event id, version and time, the interaction id, the Brand and the event details.
FL2	Energy	SIEM	The Data Adapter **MUST** emit one adapter event for each Data Adapter API request, carrying the request's HaaS and FAPI headers.
FL3	Energy	SIEM	DSaaS:Flux **MUST** emit one Flux event before each Flux API call.
FL4	Energy	SIEM	DSaaS:Flux **MUST** emit a subscription event for each arrangement change that opens, updates or ends data collection for a Principal.
FL5	Energy	SIEM	DSaaS:Flux **MUST** emit a poller heartbeat event for each Brand each time it checks the cache for data to refresh.
FL6	Energy	SIEM	The Data Adapter **MUST** emit a cache event recording whether a Principal's customer data was unconsented, unfilled, stale or fresh when served.

3.8 Hosting

Biza **MUST** host DSaaS:Flux under the Hosting Schedule. Its requirements FH1 to FH10, FC1 to FC3, FL7, FV1, FV2 and FP5 are set out there.

3.9 Availability and Error Handling

The service levels for DSaaS:Flux are those of the Service Level Agreement. This Schedule sets no availability figure specific to DSaaS:Flux.

DSaaS:Flux **MUST** handle availability and errors as follows:

Functional Requirement	Sectors	Category	Requirement
FV3	Energy	Availability	Get Service Health Status **MUST** report UP while the Data Adapter is serving requests.
FV4	Energy	Error handling	When data needed for a response is not yet cached, the Data Adapter **MUST** retry up to 12 times with exponential backoff from 300 milliseconds, then answer HTTP 504 (Datapoint is not ready).
FV5	Energy	Error handling	A request for a resource that is not valid for the Principal **MUST** be answered HTTP 400.
FV6	Energy	Error handling	A Flux API error **MUST** keep the HTTP status Flux returned, and a Flux API call that fails to complete **MUST** be recorded as HTTP 504.
FV7	Energy	Error handling	A failure of the Flux API during Get Username Attributes or Get User Principals **MUST** be passed to HaaS: Platform with the upstream status, and an upstream HTTP 500 as a CDR unexpected error.

4. Client Obligations

The Client **MUST** provide the following for the delivery of DSaaS:Flux:

Functional Requirement	Sectors	Category	Requirement
FP1	Energy	Flux credentials	An OAuth 2.0 client ID and client secret for the client credentials grant at the Flux API token URI, with the scopes the Flux API requires for the calls in 3.3 (for example `read account_read admin payment_transaction pricing_read`).
FP2	Energy	Connectivity	The Flux API token URI, host, port, protocol and base path, reachable from the Space.
FP3	Energy	Brands	For each Brand: a brand identifier equal to the brand name the Flux API returns for that brand's parties, its FRMP identifier, and its HaaS customer identifier.
FP4	Energy	Consumer Data	In Flux, a unique email address on each Consumer's person party, a birth date for each person, and data-sharing blocks for Consumers who are to be blocked.
FP6	Energy	HaaS	A HaaS: Platform tenancy whose realms for each Brand are `<haasCustomerId>-auth` and `<haasCustomerId>-dashboard-auth`.

5. Excluded Functionality

The following functionality is **not** delivered by DSaaS:Flux:

5.1 Banking and Non-Bank Lending sectors: DSaaS:Flux serves Energy sector Data Adapter endpoints only.

5.2 Login and notification delivery: DSaaS:Flux does not deliver the Init Login, Verify Login or Send Notification endpoints. One-time passwords and notifications are sent by HaaS: Platform.

5.3 Principal event history and deletion in DSaaS:Admin: DSaaS:Admin does not show a Principal's event history, and a Principal cannot be deleted from DSaaS:Admin.

5.4 Hosting exclusions: the hosting arrangements that are not offered are listed in the Hosting Schedule.