SYMBEEO

PUBLIC

DESIGN STUDY

One cost dataset for a retailer across AWS, Google Cloud and its private cloud, on FOCUS

Complete design on current platforms

CAPABILITY	INDUSTRY	SETTING
Cloud	Retail	Retail group
DOCUMENT	**VERSION**	**DATE**
CLD-005	1.1	Oct 10, 2026

WRITTEN BY

Steve Phillips, Principal Data Center Architect

© 2026 Symbeeo. All rights reserved.

Document control

Document	CLD-005	Version	1.1
Issued	Oct 10, 2026	Status	Issued by Symbeeo
Classification	Public	Supersedes	1.0, Sep 27, 2026
Capability	Cloud	Industry	Retail
Author	Steve Phillips	Role	Principal Data Center Architect
Credentials	CCSP, CCIE, AWS Certified Security – Specialty		
Approval	Approved by Edwin Ozer, Founder, Oct 10, 2026. Issued by Symbeeo, Oct 10, 2026. Design study: every figure is vendor-published, a design target or a marked assumption.		
Sign-off	"An engagement under this design is signed by the practice lead before any build proceeds."		

Contents

1 · Scope 3
1c · Public implementations this design follows 4
2 · Requirements register 5
3 · Architecture overview 6
4 · Design by subsystem 6
5 · Failure behavior 7
6 · Limits 8
7 · Lessons learned 8
8 · The author 8

© 2026 Symbeeo. All rights reserved. · Public

CONVENTIONS

Source tags. [S] figure read from the vendor's or publisher's own current page on Sep 24, 2026, or on Sep 27, 2026 where the Related documents say so · [S*] figure from the page summary where the page itself could not be opened · [A] design assumption, to be confirmed by the signing engineer · [T] design target: the record's outcome figure and anything derived from it. No figure comes from any engagement, file or asset. A row with more than one tag is counted once: as a published figure if any tag is [S] or [S*], otherwise as an assumption if any tag is [A], otherwise as a design target.

Table 1. Revision history

Date	Version	Change
Sep 27, 2026	1.0	First issue.
Oct 10, 2026	1.1	Approval line now reads: approved by the Founder, issued by Symbeeo. Steve Phillips remains the author.

1 · Scope

Who it is for. The head of FinOps at a retail group, reporting to the CFO, whose e-commerce runs on AWS, whose analytics run on Google Cloud and whose store back office runs on a private cloud — three bills in three shapes — and who cannot yet tell the board what one product line's technology costs, or whether a workload would be cheaper somewhere else.

Typical buyer [A]. A retail group with 900 stores. AWS: 180 accounts, about €1.2 million a month. Google Cloud: 60 projects, about €0.4 million a month, BigQuery as the analytics platform. Private cloud: two pods (SRA-DC-001) with a cost model of about €0.5 million a month covering depreciation, power, space, licenses and staff. 40 owning teams across six product lines. At the start, 71 % of spend reaches a named owner.

What is in. The three cost sources, one table in FOCUS form, the private-cloud rows, tags and allocation rules, monthly validation and invoice reconciliation, showback, and the cost input to each workload's placement score. This is SRA-CLD-001 R13 and R14 and §4.8 applied to one estate. **What is out.** Commitment purchasing (savings plans, committed-use discounts); the private-cloud cost model's own inputs, which are finance's; any change to where a workload runs.

Assumptions. The table lives in BigQuery because the analytics team already runs it [A]. Every AWS account and Google project already carries an owner tag or label, even where resources do not [A]. Finance publishes the pods' monthly rate card by working day 3 [A].

Related documents, read Sep 24, 2026.

- AWS, Data Exports for FOCUS 1.2 is now generally available — https://aws.amazon.com/about-aws/whats-new/2025/11/aws-data-exports-focus-1-2-available/
- Google Cloud, set up FOCUS Cloud Billing data export to BigQuery — https://docs.cloud.google.com/billing/docs/how-to/export-data-bigquery-focus-setup
- Google Cloud, structure of FOCUS data export (conformance gaps) — https://docs.cloud.google.com/billing/docs/how-to/export-data-bigquery-tables/focus-export
- FinOps Foundation, FOCUS specification — https://focus.finops.org/focus-specification/
- FinOps Foundation, introducing FOCUS 1.4 — https://www.finops.org/insights/introducing-focus-1-4/
- FinOps Foundation, 2026 FinOps Framework — https://www.finops.org/insights/2026-finops-framework/

Read Sep 27, 2026.

© 2026 Symbeeo. All rights reserved. · Public

- FinOps Foundation, FOCUS Validator (hosted page: versions 1.2 and 1.3, files up to 10 MB; production checks run the open-source package) — https://focus.finops.org/docs/tools-assets/tools/focus-validator/
- FinOps Foundation, focus_validator releases (2.1.0 of Mar 3, 2026 adds FOCUS 1.3; current release 2.2.1 of Aug 5, 2026; the package defaults to validating 1.2) — https://github.com/finopsfoundation/focus_validator/releases
- FinOps Foundation, focus_validator pull request 147, "FOCUS 1.4 Support", merged Jul 15, 2026 and included in 2.2.1 — https://github.com/finopsfoundation/focus_validator/pull/147
- FOCUS specification releases: v1.2 May 29, 2025, v1.3 Dec 8, 2025, v1.4 Jun 4, 2026 — https://github.com/FinOps-Open-Cost-and-Usage-Spec/FOCUS_Spec/releases
- FinOps Foundation, FOCUS 1.5 release scope (status as of September 17, 2026; ratification planned for December 3, 2026) — https://focus.finops.org/focus-1-5-release-scope/
- AWS Data Exports user guide (export types listed: FOCUS 1.2 and FOCUS 1.0 with AWS columns) — https://docs.aws.amazon.com/cur/latest/userguide/what-is-data-exports.html
- FinOps Foundation, FOCUS adoption by FinOps practitioners (the brewer's story among others) — https://focus.finops.org/adoption/finops-practitioners/ ; the brewer's talk, published on YouTube Dec 9, 2024 — https://www.youtube.com/watch?v=SeRS-FUHHqA

1c · Public implementations this design follows

Table 2. Public implementations this design follows

Implementation	Who published it · date	What it settles for this design	URL
AWS Data Exports for FOCUS 1.2: invoice reconciliation, capacity-reservation tracking, virtual currency; delivered to Amazon S3; configured in US East (N. Virginia), covering all commercial regions	AWS What's New · Nov 19, 2025 · vendor documentation, used to build our own design	R4 and R14	https://aws.amazon.com/about-aws/whats-new/2025/11/aws-data-exports-focus-1-2-available/
FOCUS 1.4 ratified June 4, 2026: Invoice Detail and Billing Period datasets; Data Center named as a future spending scope. The post said Validator support for 1.4 would follow later in Q3 2026; it was merged on July 15, 2026 and ships in release 2.2.1 of August 5, 2026 (Related documents)	FinOps Foundation · Jun 10, 2026 · published standard, used to build our own design	R3, R7, R8	https://www.finops.org/insights/introducing-focus-1-4/
FinOps Framework 2026: Public Cloud, SaaS, Data Center, Data Cloud Platforms and AI as technology categories	FinOps Foundation · Mar 19, 2026 · published standard, used to build our own design	R13: private-cloud cost belongs in the same practice	https://www.finops.org/insights/2026-finops-framework/
A multinational brewer's public talk: cost data from four public clouds (Azure, AWS, Google Cloud, IBM) and its local private cloud, merged by hand in Excel before, normalized into the FOCUS format for chargeback and total cost of ownership	the brewer's talk, listed by the FinOps Foundation · talk published Dec 9, 2024 · public deployment	R1 and R7: cloud and private-cloud rows in one FOCUS-shaped dataset have been done by a real company	https://focus.finops.org/adoption/finops-practitioners/

© 2026 Symbeeo. All rights reserved. · Public

2 · Requirements register

Table 3. Requirements register

#	Requirement	Value	Source
R1	Sources	AWS · Google Cloud · private cloud, into one table	[A]
R2	Allocation	≥ 95 % of each month's spend to a named owner (71 % at the start)	[T]; [A] start
R3	Schema floor	every row conforms to FOCUS 1.2 or later	[T]
R4	AWS source	Data Exports for FOCUS 1.2, delivered to S3	[S] GA November 19, 2025
R5	Google source	FOCUS BigQuery export: immutable dataset, 2-year TTL, Preview	[S]
R6	Retention	≥ 3 years of rows in a client-owned table	[T]
R7	Private-cloud rows	the pods' monthly cost as FOCUS-shaped rows with the same tag keys	[T]
R8	Validation	each month passes the open-source FOCUS Validator, run in the client's environment, at the version in use (1.2 today)	[T]; [S] Validator covers 1.2 and 1.3, and 1.4 from release 2.2.1 (Aug 5, 2026)
R9	Tag keys	owner · cost-center · environment · data-class · placement-id	[A] SDD-CLD-001 §4.8
R10	Freshness	table refreshed daily; month closed by working day 5	[T]
R11	Showback	monthly per owner and per product line	[T]
R12	Placement input	100 % of new workloads carry a 3-year cost from this table before build	[T]
R13	One practice	public cloud and data-center spend in one reporting scope	[S] FinOps Framework 2026 categories
R14	Invoice reconciliation	table total within 0.5 % of each provider invoice	[T]; [S] FOCUS 1.2 on AWS adds invoice reconciliation

Fourteen rows; five carry a published figure, three are design assumptions, six are design targets.

© 2026 Symbeeo. All rights reserved. · Public

3 · Architecture overview

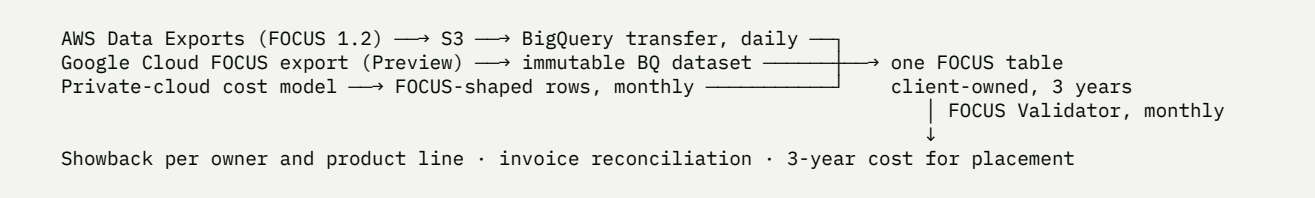


Figure 1. FOCUS cost dataset flow

Three sources, one schema, one table the retailer owns. The providers' own exports are used as delivered; the only rows the retailer writes itself are the private cloud's, and they carry the same keys as everything else so a product line's total crosses all three places.

Table 4. Architecture overview

Role	Product (exact model)	Qty	Capacity used	Why this unit
AWS source	AWS Data Exports, FOCUS 1.2	1 export	180 accounts [A]	GA; invoice reconciliation columns [S]
Google source	Cloud Billing FOCUS export to BigQuery	1 per billing account	60 projects [A]	immutable dataset, 2-year TTL [S]
Schema	FOCUS 1.2 floor; 1.4 current	1	all rows [T]	1.4 ratified June 4, 2026 [S]
Conformance	FOCUS Validator, open-source package 2.2.1	1 run per month	full month [T]	covers 1.2, 1.3 and 1.4; the hosted page takes files up to 10 MB and lists 1.2 and 1.3 only [S]
Table and reporting	BigQuery, existing	1 dataset	3 years of rows [T]	analytics team already runs it [A]

4 · Design by subsystem

4.1 Sources.

AWS Data Exports for FOCUS 1.2 has been generally available since November 19, 2025, is configured in US East (N. Virginia) and covers all commercial regions [S]; the export lands in an S3 bucket and a daily BigQuery transfer loads it [A]. Google's FOCUS export writes to a Google-provided immutable dataset with a 2-year time-to-live, backfilling from the start of the previous month over up to five days [S]. It is Preview, "available 'as is'" [S], so the standard detailed billing export stays on as a fallback source [A]. Rejected: the providers' native reports side by side — three schemas, no shared owner key, fails R1.

4.2 Private-cloud rows.

FOCUS names the data-center scope for future versions only [S], so no generator exists for the pods. Finance's monthly rate card is applied to each VM and namespace by owner tag, and emitted as rows with billed cost equal to effective cost, the pods as provider and the same five tag keys [A]. The FinOps Framework 2026 lists Data Center beside Public Cloud as a technology category [S], which is the basis for one scope (R13). Rejected: a separate private-cloud report — the board sees two totals and no comparison, and R12 cannot be met.

© 2026 Symbeeo. All rights reserved. · Public

4.3 Schema version.

The floor is 1.2 because the AWS export is 1.2 and Google publishes its export's conformance gaps against FOCUS 1.0, 1.1 and 1.2 [S]. FOCUS 1.4, ratified June 4, 2026, adds the Invoice Detail and Billing Period datasets [S]; the table moves to it when the AWS export does. On Sep 27, 2026 AWS Data Exports lists FOCUS 1.2 and 1.0 exports only [S], while the Validator already checks 1.4 (release 2.2.1, August 5, 2026) [S], so the AWS export is the only gate. Rows are copied daily from Google's immutable dataset into the client-owned table, because the 2-year TTL is shorter than R6 **[S][T]**.

4.4 Tags and allocation.

Five keys (R9), checked at create time by pipeline in production accounts and projects [A]. Resources without an owner tag fall back to the owner of their account or project, which every account and project carries [A]. Shared costs — support plans, the network hub, commitments — are split by each owner's share of usage [A]. Target: from 71 % to ≥ 95 % allocated within three months [T]. Rejected: allocating untagged spend to a central IT line — hides exactly the spend the board is asking about.

4.5 Validation and reconciliation.

Each month's rows run through the open-source FOCUS Validator in the client's environment before close (R8) [T]; the hosted page is limited to files of 10 MB and meant for samples, and the Foundation points production checks to the package [S]. The table's total per provider is compared with that provider's invoice; a gap above 0.5 % holds the month open (R14) [T]. The AWS FOCUS 1.2 export carries the invoice reconciliation columns this needs [S].

4.6 Showback and placement.

A monthly statement per owner; a product line is the sum of its owners [A]. For a new workload or a move, the 3-year cost of the current place comes from this table and the candidate's from a quote, and both enter the placement score of SRA-CLD-001 R14 [T].

5 · Failure behavior

Table 5. Failure behavior

Failure	Behavior	Source
Google FOCUS export late or its columns change	Google rows flagged incomplete; fallback view over the standard export used	[S] Preview terms; [A] fallback
AWS export misses a day	next delivery restates month to date; the gap flagged, not filled	[A]
Validator fails a month	month not closed; rows quarantined, fixed and re-run	[T] R8
Unallocated spend above 5 %	owners of the 20 largest untagged items notified; production creates without tags refused	[A]
Private-cloud rate card late	last month's card applied, rows marked estimated	[A]
Total off an invoice by more than 0.5 %	month held open; difference traced to credits, tax or rounding	[T] R14

© 2026 Symbeeo. All rights reserved. · Public

6 · Limits

- Google's FOCUS export is Preview and Google lists conformance gaps against FOCUS 1.0–1.2 [S]; conformance of the delivered rows is tested each month, not assumed.
- FOCUS has no data-center scope yet [S]; the private-cloud rows are the client's own mapping and their comparability with cloud rows is reviewed yearly.
- The table stays on 1.2 until the AWS export moves past 1.2 [S]. The Validator already covers 1.2, 1.3 and 1.4 [S]; FOCUS 1.5 is planned for ratification on December 3, 2026 [S] and re-opens the version choice then.
- All spend figures and the 71 % starting point are assumptions.
- Commitment amortization follows each provider's effective-cost columns; optimizing commitments across providers is out of scope.

7 · Lessons learned

None yet — this is a design study; populated after the first build against it.

8 · The author

WRITTEN BY

Steve Phillips

Principal Data Center Architect

CCSP, CCIE, AWS Certified Security – Specialty

Signed off by Edwin Ozer, Founder.

© 2026 Symbeeo. All rights reserved. · Public

SYMBEEO

Each vendor's tool shows you their option. We show you all of them against one requirement.

Compared. Then Delivered.

hello@symbeeo.com · symbeeo.com

© 2026 Symbeeo. All rights reserved.

Product and company names and logos are their owners' trademarks, shown only to identify the lines Symbeeo sources. Naming a vendor or showing its logo does not mean the vendor sponsors or approves Symbeeo's comparisons or any recommendation Symbeeo makes.

Figures are as published by their sources on the dates given in this document; figures marked [A] are assumptions.

CLD-005 · Version 1.1 · Oct 10, 2026