

Data Centre Allocation Waste

Controlled Proof Results

Urbyte verifies allocation waste. Keelo governs the resulting condition, execution and reconciliation.

PROOF RESULT	RAW EVIDENCE	ASSETS	EXECUTIONS
PASS	420,000 rows	5,000	1,157

1. Evidenced / Current

Controlled proof scope. A synthetic 84-day data-centre evidence fixture was ingested and processed through Urbyte domain verification and the existing Keelo governance and execution architecture. The raw fixture contained no waste classifications, actions, receipts, savings values, emissions outcomes or aggregate proof results.

Evidence	Result
Branch	[REDACTED internal detail]
Proof commit	[REDACTED internal detail]
Fixture	[REDACTED internal detail]
Fixture SHA-256	[REDACTED internal detail]
Raw rows	420,000
Distinct assets	5,000
Evidence window	84 consecutive days
Provisioned CPU	216,792 cores
Provisioned memory	867,168 GB
Recorded energy	9,994,375.817 kWh
Runtime	27.684 seconds
Proof result	PASS

2. System-Derived Classification

Classification	Assets	Share of assets
Verified	4,323	86.46%
Actionable verified	1,157	23.14%
Verified, no action	3,166	63.32%
Unverifiable	677	13.54%
Reconciled exactly once	5,000	100.00%

Unverifiable reason occurrences can overlap within a single asset.

Reason	Occurrences
Duplicate evidence date	146
Invalid telemetry	381
Low evidence confidence	150
Missing telemetry	238
Non-contiguous evidence	146

3. Verified Allocation Waste

Measure	System-derived result
Verified stranded CPU	44,617.23616 cores
Verified stranded memory	178,468.944638 GB
Attributable idle energy	2,055,593.798504 kWh
Provisioned power exposure	1,529.503056 kW

4. Controlled Commercial and ESG Derivation

Reference values were applied only after waste verification. These figures quantify controlled analytical exposure. They are not realised savings, measured emissions reductions, ISO 14001 certification claims or production environmental performance statements.

Measure	Controlled result
Electricity reference	AUD 0.30/kWh
Emissions reference	0.65 kg CO ₂ -e/kWh
Attributable electricity-cost exposure	AUD 616,678.14
Attributable emissions exposure	1,336,135.969 kg CO ₂ -e
Attributable emissions exposure	1,336.136 t CO ₂ -e
Realised financial outcome	NOT ESTABLISHED
Realised environmental outcome	NOT ESTABLISHED

5. Keelo Governed Execution

Control	Result
Persistent conditions established	1,157
Authorised actions	1,157
Controlled external executions	1,157
Durable receipts	1,157
Outcomes verified	1,157
Duplicate executions	0
Unresolved obligations	0

Execution path: raw evidence → Urbyte verification → persistent Keelo condition → accountable owner → authority check → authorised action → controlled external execution → durable receipt → outcome verification → reconciliation.

6. Integrity and Control Results

- Every asset was classified exactly once.
- Every persistent condition traces to qualifying raw evidence.
- Every action and receipt traces to an authorised condition.
- Every completed action reconciles to an outcome.
- Restarted service composition reconstructed persisted transactions.
- Duplicate execution replay caused no second external effect.
- Keelo Core remained unchanged.
- Existing 1,000-service and 5,000-service mobile proof fixtures remained unchanged and both mobile proofs passed again.

7. Validation Gates

Gate	Result
Build	Passed
Typecheck	Passed
Integration typecheck	Passed
Boundary checks	Passed
Verification	510/510 tests across 45/45 files
Firestore integration	20/20 tests across 2/2 files
[REDACTED internal reproduction instructions]	Passed
Working tree after commit	Clean

8. What This Proof Establishes

Evidenced / Current. The same Keelo execution architecture governed independently derived allocation-waste conditions across a second operational domain without changing Keelo Core. Urbyte domain logic remained outside Core, while evidence provenance, persistent state, authority, accountable ownership, controlled execution, durable receipts, duplicate safety and reconciliation were preserved.

This proof does not establish. Production deployment, actual customer savings, actual emissions reduction, autonomous production infrastructure shutdown, ISO 14001 conformity, or production-grade environmental reporting.

9. Next Proving Work

- Run the same evidence and governance path against an authorised data-centre evidence export.
- Use approved production persistence and execution configuration.
- Measure post-action energy and capacity outcomes separately from analytical exposure.
- Establish realised AUD savings only from measured post-action evidence.
- Establish environmental outcomes only from measured production evidence and the applicable reporting framework.

10. Destination Case

An authorised production deployment in which Urbyte continuously verifies allocation waste from operational evidence and Keelo governs resulting conditions through accountable ownership, authority-controlled execution, durable receipts and verified recovery outcomes.

Urbyte proves → Keelo governs