

Jam Benchmark and Source Truth Register

Claim register separating canonical claims, historical trial evidence, roadmap items, and retired language.

Diligence • Cithorum • May 2026

Jam has a long technical history and some older decks used aggressive language. This register preserves the useful facts while making clear which claims are approved for outward use and which need validation artefacts. All commercial entries are now attributed to the Cithorum entity that holds the relationship.

1. Approved Canonical Claims

Claim	Approved phrasing	Primary source	Status
Compression envelope	Up to 100× reduction in benchmark for sparse / highly compressible payloads; typical workloads 35–75% reduction.	MASTER-REFERENCE; Jam-Networked-Storage.	Approved.
Backup-tier vs rsync	On backup workloads, Jam observes ≈100× compression against rsync (April 2026 live test, 123 GB → 1.18 GB).	Cithorum + Jam April 2026 backup-tier benchmark recording (videopress.com/v/w4Z0jvUC).	Approved tied to backup-tier corpus only.
Scale-AI average	5× average compression on the Scale-AI MVP dataset.	MASTER-REFERENCE.	Approved only tied to MVP scope.
Rsync-style speed	Up to 400× faster than classical rsync on the Scale-AI MVP benchmark.	MASTER-REFERENCE; Scale-AI scope.	Approved with benchmark qualifier.
AI/ML data loading	Up to 1000× faster data loading for compatible AI/ML pipelines.	MASTER-REFERENCE; commercial licensing benchmark note.	Approved with compatibility qualifier.
Storage footprint	Up to 50% reduction in storage footprint for typical enterprise workloads.	MASTER-REFERENCE.	Approved.
Bandwidth/compute cost	Up to 40% reduction in compute and bandwidth cost.	MASTER-REFERENCE.	Approved.
GPU-free	Jam's core software data plane does not require GPUs; it can extend hardware life and lower power/cooling demand.	MASTER-REFERENCE KIC table; ITB docs.	Approved; do not imply all training avoids GPUs.
Security model	Keyless-at-rest means deterministic key derivation from seed material; no key distribution and no key storage at rest.	MASTER-REFERENCE; MITM; JSL; SLA.	Approved.
PQC posture	FIPS 140/2 compliant today; FIPS 140/3 planned; migration path to FIPS 203	MASTER-REFERENCE; MITM; JSL.	Approved; not FIPS 140/3 certified yet.

	ML-KEM and FIPS 204 ML-DSA.		
SOC 2 / cross-standard posture	SOC 2 compliant. ISO 27001, ISO 27701, HIPAA, PCI-DSS, RBI, CERT-In, MeitY, and DPDP listed as aligned (control mapping available) until certification or empanelment is complete.	Cithorum SOC 2 attestation document (dataroom, NDA); control mapping spreadsheet (dataroom).	Approved with grade qualifier.

2. Benchmark Methodology Claims

Aspect	Canonical value	Notes
Corpus	64 TB aggregate across five 12.8 TB workload classes.	Sparse telemetry, mixed log, document, binary-heavy, pre-compressed.
Reference rig	2× AMD EPYC 7543, 512 GB RAM, 4× 7.68 TB NVMe, 100 GbE.	Do not generalise throughput beyond this class of hardware.
Software base	Ubuntu 22.04 LTS, kernel 5.15, io_uring enabled, Jam 2.1.x stable.	Use for reproducibility.
Statistical treatment	Median of five runs, with IQR and raw results retained.	Scale-AI scope expects third-party reproduction within ±10%.
Backup-tier benchmark (rsync comparator)	April 2026: 123 GB backup workload reduced to ~1.18 GB; comparator was rsync (default delta-transfer mode).	Backup-tier corpus; encoder NVMe random-read bound at 281 MB/s; recording videopress.com/v/w4Z0jvUC.

3. Historical Trials, Demos, and Proof Points

Source	Truth-grounded statement	Source	External-use guidance
Atreides IO demo	50 GB big-data corpus compressed to 7 MB and reconstructed on a standard MacBook in under 5 minutes. Atreides operated a Cloud DNS / big-query service with more than 2,000 TB/month DNS requests and wanted Spark compatibility.	JAM Legacy Deck; Cithorum Jam Company Deck; user correction.	Use as demo proof and roadmap driver. Do not market 7,000:1 as typical.
Atreides quote	"What JAM has done is changed the game."	Cithorum Jam Company Deck; Cithorum proof register.	Safe as testimonial if permission/logos are cleared.
NVIDIA quote	"I think I just witnessed accelerated compute."	Cithorum Jam Company Deck; Cithorum proof register.	Safe as testimonial if programme/badge permissions are cleared.
NVIDIA Inception	NVIDIA Inception programme membership is supported by the Inception reception invitation, which states the email was sent via the Inception membership list.	NVIDIA Inception reception invitation email PDF, April 29, 2026.	Safe as programme membership / ecosystem validation; do not present as technical certification.
NATO / UNITE-Brave	The NATO Communications and Information Agency email thread supports access to the UNITE-Brave NATO web portal and registration / matchmaking path for the	Fwd_RE_UNITE - Brave NATO web portal now live.pdf.	Use as NATO/UNITE portal access or approval; avoid implying Jam was technically endorsed by NATO.

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	programme.		
RTX / Raytheon ecosystem	Supplier.io acceptance email says the profile was reviewed, approved, and added to the RTX ecosystem; user context identifies this as Raytheon's partner channel.	Fwd_ Congratulations! Your profile has been accepted_.pdf.	Use as approved RTX / Supplier.io profile access; not as a customer contract.
ZenLaunchpad quote	"JAM is way beyond MVP."	Cithorum Jam Company Deck; Cithorum proof register.	Safe as testimonial if permission cleared.
SwissVault FASTQ	12% smaller FASTQ DNA sequences; 22-minute alignment path versus 2.5 hours for the next closest state-of-the-art aligner.	Direct user-supplied note, April 25, 2026; legacy deck confirms SwissVault DNA trial.	Use as historical benchmark; attach formal run sheet before scientific publication.
Human DNA storage	Stored human DNA 12% more efficiently than known alternatives in the old deck claim.	Cithorum Jam Company Deck; legacy deck context.	Use carefully; avoid 'any known algorithm' unless source package is attached.
Ubuntu VM	Ubuntu VM stored 45% smaller via Jam versus alternatives.	Direct user-supplied note, April 25, 2026.	Use as trial-derived benchmark until reproduced.
April 2026 100× rsync backup-tier benchmark	Cithorum live test on a 123 GB backup workload: rsync delta-transfer comparator vs Jam path; result ≈100× compression on the same corpus, final size ~1.18 GB.	Cithorum + Jam April 2026 backup-tier benchmark recording (videopress.com/v/w4Z0jvUC); raw run logs retained internally.	Use as the canonical backup-tier benchmark. Do not generalise to mixed enterprise workloads.
InterDigital	Tested Jam for multimedia and game-engine file storage.	JAM Legacy Deck.	Historical trial context only.
M2M rate	CAD \$1.50/TB/month usage rate with CAD \$2,000 monthly minimum in the M2M / TechConnect SKU.	MASTER-REFERENCE; Licensing Proposal; Jam Showcase.	Commercial / pricing claim, not technical benchmark.
M2M formal MRR	M2M Tech Connect is a formal paying client of Cithorum (Canada) at \$7K/month MRR. Lucas message says the first invoice was sent to M2M, Jam for Linux was delivered, and MacOS access was provided.	User-confirmed formal MRR, April 29, 2026; Lucas WhatsApp screenshot supplied by user; Re_Partnership Proposal.pdf confirms first invoice / SLA attached and Jam for Linux sent.	Use as commercial validation and recurring revenue proof. Counterparty entity: Cithorum (Canada).

4. Retired or Unsafe Claims

Retired claim	Problem	Replacement
48,900× more cost-effective than GPU training	Retired in MASTER-REFERENCE as unsourced/aggressive.	Use core data plane is CPU/software-first; quantify with benchmarked storage / bandwidth / power model.
140× RAM extension / only 1/140th DRAM	Master reference says this is imprecise.	Filesystem-as-RAM extension pattern reduces working-set RAM by up to an order of magnitude on supported workloads.
World's first keyless encryption system using big-data itself as the key	Cryptographically imprecise and not canonical.	Keyless-at-rest: deterministic key derivation from seed material; no key

		storage at rest.
Bends time and space	Marketing metaphor; not technical.	Use measurable transfer, compression, latency, and reconstruction results.
Universal 100× compression	Canonical pack explicitly rejects universal 100×.	Up to 100× sparse; 35–75% typical; pre-compressed may show only about 4% reduction. Backup-tier 100× requires backup-tier corpus.
FIPS 140/3 certified today	Source says planned/CMVP submission, not complete.	FIPS 140/2 compliant today; FIPS 140/3 planned.
secp256k1 hash	Incorrect; source explicitly corrected it.	secp256k1 is an elliptic curve used for ECDH/ECDSA.

5. Commercial and Integration Facts

- Pricing families in the Cithorum source pack: Commercial USD tiers, Defence CAD/ITB tiers, and M2M / Trial CAD pricing.
- The M2M SKU has a CAD \$2,000 monthly minimum and CAD \$1.50/TB/month storage overage, implying 1,333 TB/month included at the minimum.
- M2M Tech Connect commercial proof: formal \$7K/month MRR booked against Cithorum (Canada). Jam for Linux was delivered, SLA and first invoice were sent, and Lucas confirmed the first invoice event.
- Commercial tiers in the master reference: Starter 1 TB at USD \$950/month; Growth 10 TB at USD \$4,500/month; Scale 50 TB at USD \$14,500/month; Custom above 50 TB.
- Atreides IO is best represented as a commercial integration target requiring Apache Spark Java/Scala compatibility, not as a completed Spark deployment unless a newer signed source says so.
- Partner-access proof includes NVIDIA Inception membership, RTX/Supplier.io profile approval, and UNITE-Brave NATO portal access. These are ecosystem / procurement validations, not technical benchmark results.
- Air-gapped and sovereign deployment support is source-backed, but managed uptime SLOs do not apply automatically to customer-operated air-gapped environments.

6. Source Coverage Matrix

Source	Reliable for	Cautions
MASTER-REFERENCE.md	Canonical performance, crypto, pricing, CCV, terminology, retired claims.	Always the senior source.
Jam-Networked-Storage	RAMOPS architecture, benchmark methodology, reference results, SLOs.	Throughput tied to reference rig.
Jam-Standard-Library	JSL primitives, API-level primitive names, certification posture.	Does not reveal proprietary compression internals.
Jam-MITM-Hardness	Threat model, session establishment, MITM defence, PQC migration.	Endpoint compromise and side-channels are non-goals.
Jam-Installation-Guide	Supported platforms, install paths, jam verify, air-gapped hardening.	Release fingerprint placeholder must be published before broad use.
Jam-SaaS-Archiver	WORM, legal hold, archive SLOs, signed audit records.	SOC 2 compliant; ISO items aligned/roadmap where stated.
Scale-AI Scope	Validation plan, corpus, success criteria, reproducibility.	Scope, not proof of completed independent validation unless later report exists.
Old decks	History, trial accounts, Atreides/SwissVault/InterDigital, HyperRuntime concept.	Contains retired/aggressive claims; use only through this register.
User April 25 note	SwissVault FASTQ, 22-minute alignment, Ubuntu VM 45%, Atreides integration emphasis.	Needs formal run sheets for external scientific/technical publication.
April 2026 partner proof PDFs	NVIDIA Inception membership signal,	Use as commercial / procurement

	RTX/Supplier.io profile approval, UNITE-Brave NATO portal access, M2M first invoice/SLA delivery.	validation, not as performance proof.
Lucas April 29 screenshot	M2M first invoice sent and Jam for Linux delivered; user confirms formal \$7K/month MRR.	Use as formal MRR and customer revenue validation.
April 2026 backup-tier 100× rsync benchmark recording	Cithorum live test on backup-tier corpus; rsync as comparator; ≈100× compression observed.	Use as backup-tier benchmark; do not extend to mixed enterprise workloads.

7. Minimal Safe Investor Language

Jam is a software data plane that reduces storage, bandwidth, and I/O waste for large changing datasets. The canonical April 2026 source pack supports a benchmark envelope of up to 100× reduction on sparse / highly compressible payloads and 35–75% typical reduction across mixed workloads, with a reproducible 64 TB benchmark methodology. On backup-tier workloads specifically, the April 2026 live test against rsync as the comparator showed ≈100× compression (123 GB → 1.18 GB; recording at videopress.com/v/w4Z0jvUC). Jam uses content-addressed immutable objects, quorum replication, authenticated transport, and deterministic key derivation so session keys are derived on demand rather than stored at rest. Historical trials include Atreides IO, InterDigital, and SwissVault; the strongest named genomics proof is SwissVault, where Jam produced 12% smaller FASTQ DNA sequences and a user-confirmed 22-minute alignment path versus 2.5 hours for the next closest state-of-the-art aligner. Commercial validation includes M2M Tech Connect as a formal paying client of Cithorum (Canada) at \$7K/month MRR, NVIDIA Inception membership, RTX/Supplier.io profile approval, and UNITE-Brave NATO portal access. Cithorum is SOC 2 compliant; ISO 27001, ISO 27701, HIPAA, PCI-DSS, RBI, CERT-In, MeitY, and DPDP are listed as aligned (control mapping available).

Source Boundary

These documents draw on the canonical Jam source archive maintained by Cithorum. They do not invent new performance numbers. Where a claim comes from an older deck rather than the April 2026 canonical source pack, it is labelled as historical, trial-derived, or requiring formal benchmark attachment before external publication.

- Cithorum Reworked-v2 MASTER-REFERENCE.md (April 17, 2026)
- Jam-Networked-Storage.docx, v2.1, April 2026
- Jam-Standard-Library.docx, v2.1, April 2026
- Jam-MITM-Hardness.docx, v2.1, April 2026
- Jam-Installation-Guide.docx, v2.1, April 2026
- Jam-SaaS-Archiver.docx, v2.1, April 2026
- Cithorum-Scale-AI-Scope-Requirements.docx, v2.1, April 2026
- Cithorum-Licensing-Proposal.docx, v2.1, April 2026
- Cithorum-M2M-TechConnect-SLA.docx, v2.1, April 2026
- Jam-Showcase.html, Reworked-v2 commercial showcase
- Cithorum Jam Company Deck.pdf, May 2025
- JAM - Legacy Deck.pdf, November 2024
- Direct user-supplied SwissVault/Ubuntu benchmark note, April 25, 2026
- M2M Partnership Proposal email thread PDF, April 28-29, 2026
- M2M Tech Connect formal \$7K/month MRR confirmed by user, April 29, 2026; Lucas screenshot confirms first invoice sent and Jam for Linux delivered
- RTX / Supplier.io profile acceptance email PDF, April 29, 2026
- UNITE-Brave NATO portal email from NATO Communications and Information Agency PDF, April 29, 2026
- NVIDIA Inception reception invitation email PDF, April 29, 2026

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- Cithorum + Jam backup-tier 100× rsync benchmark, April 2026 (recording: videopress.com/v/w4Z0jvUC)