COMPREHENSIVE CRYPTO DATA INFRASTRUCTURE

Vendor Assessment & Budget Recommendations
January 2025 | Lighthouse Macro Research

Bottom line: Build a $0/month foundation covering derivatives, spot data, and DeFi TVL across major assets. Strategic upgrades to Santiment Pro ($49/mo) and CoinGlass ($29/mo) provide comprehensive on-chain fundamentals and production-grade derivatives coverage for $78/month total. This delivers full-stack crypto data infrastructure at <10% of traditional institutional platforms while maintaining API access and systematic coverage.

THE COVERAGE GAP PROBLEM

No single vendor provides comprehensive coverage across all major crypto assets at reasonable cost. The market is fragmented:

- **Glassnode:** Excellent BTC/ETH coverage, minimal altcoin metrics
- **Token Terminal:** Strong DeFi/smart contract platforms, excludes PoW chains entirely
- **CryptoQuant:** BTC-dominant, limited altcoin depth, expensive API tiers
- **Messari:** Removed affordable Pro tier, pivoted toward enterprise pricing ($10K+/year)
- **Nansen:** EVM/Solana focused, wallet-labeling irrelevant for UTXO chains

The fundamental challenge: Comprehensive asset coverage + clean data + API access + reasonable cost don't exist in a single platform. This creates the shared infrastructure opportunity.

DERIVATIVES DATA: FREE-TIER DOMINANCE

Coinalyze provides genuinely free derivatives API with comprehensive coverage across BTC, ETH, SOL, AVAX, BCH, LINK, and 100+ perpetual markets. Rate limit: 40 calls/minute with no payment required. Endpoints include:

- Open interest (current + historical)
- Funding rates (current + predicted + historical)
- Liquidation history
- Long/short ratios

Limitation: Intraday data (1-minute to 12-hour intervals) retained for ~1,500-2,000 datapoints before daily deletion. Daily resolution preserved indefinitely.

CoinGlass ($29/month Hobbyist tier) provides production-grade derivatives infrastructure with superior liquidation heatmap visualization. 70+ endpoints at 30 calls/minute. Justifies upgrade when publishing

client-facing research. $79/month Startup tier increases to 80 calls/minute.

Provider	Monthly Cost	API Access	Coverage	Rate Limit
Coinalyze	**Free**	✓ Full	100+ perpetuals	40/min
CoinGlass Hobbyist	$29	✓ Full	Comprehensive	30/min
CryptoQuant Pro	$99-109	✓ Limited	BTC-heavy	800/min

Provider	Monthly Cost	API Access	Coverage	Rate Limit

ON-CHAIN FUNDAMENTALS: STRATEGIC COVERAGE

Glassnode ($29-49/month Advanced, $999/month Professional) remains industry standard for BTC and ETH macro research. 2025 expansion includes SOL, DOGE, XRP, Toncoin. API access requires Professional tier. **Value proposition:** Unmatched BTC/ETH depth if that's your primary focus. **Gap:** Minimal coverage outside top 10 assets.

Santiment Pro ($49/month, ~$44/month annual) provides broadest altcoin on-chain coverage: 2,000+ trading pairs across 750+ metrics. Includes:

- Daily active addresses
- Transaction volume and velocity
- Exchange flows (inflow/outflow)
- Holder distribution and age bands
- Development activity (GitHub commits)

14-day free trial available. GraphQL API exclusively. Free tier: 1K API calls/month with 30-day data lag.

CryptoQuant ($39/month Advanced for dashboards, $99-109/month Professional for 24-hour API, $799/month Premium for block-level) specializes in BTC exchange flows and miner behavior. **Best use case:** BTC macro positioning analysis. **Weakness:** Limited altcoin depth relative to cost.

Provider	Monthly Cost	BTC/ETH	Altcoin Coverage	API Tier
Glassnode Advanced	$29-49	✓ Excellent	⚠ Limited	Professional+
Santiment Pro	$49	✓ Good	✓ Comprehensive	All tiers
CryptoQuant Advanced	$39	✓ Excellent	⚠ Limited	Dashboards only
CryptoQuant Pro	$99-109	✓ Excellent	⚠ Limited	24-hour API

PROTOCOL FUNDAMENTALS & DEFI METRICS

Token Terminal Pro ($350/month) focuses on smart contract platform fundamentals: revenue, fees, TVL, active users for DeFi protocols. Strong coverage: SOL, AVAX, LINK, Ethereum L2s. **API access separate** from Pro tier with custom pricing. May 2025 update: 1,000 requests/minute, 250,000/day limits.

Artemis Lite (free) provides comparable protocol fundamentals with superior spreadsheet integration: CapIQ-style syntax `=ART("SOL","REV")`. Free tier: 100K Sheets calls/month, 1 dashboard, 3 charts, 3 CSV downloads. Pro tier: $300/month. **Value proposition:** 95% of Token Terminal functionality at $0/month for pre-revenue operations.

DefiLlama (free, no API key required) dominates TVL tracking with comprehensive DeFi coverage. Community endpoints include protocol revenue/fees, yields, stablecoins, bridges. Python client: `pip install DeFiLlama`. **Limitation:** DeFi-centric, excludes PoW chains without DeFi ecosystems.

Provider	Monthly Cost	Coverage Focus	API Access
Artemis Lite	**Free**	Protocol fundamentals	Spreadsheet only

DefiLlama	**Free**	DeFi TVL, revenue	✓ Public endpoints
Token Terminal Pro	$350	Smart contract platforms	Custom pricing
Messari Pro	$25-30	Research + screening	Enterprise only ($6K+)

SPOT & PRICE DATA: CCXT FOUNDATION

Binance API (free for public market data, no API key required) provides historical OHLCV back to August 2017 for spot, September 2019 for futures. Rate limit: 1,200 weight units/minute (klines endpoint: 1-5 weight). Coverage: BTC, ETH, SOL, AVAX, BCH, LINK, 500+ pairs. Intervals: 1-minute to monthly candles, 1,000 candles per request.

CCXT library (MIT-licensed, free) unifies 108+ exchanges through single Python/JavaScript interface:

```
 import ccxt
binance = ccxt.binance()
# Fetch any pair, any timeframe
ohlcv = binance.fetch_ohlcv('SOL/USDT', '1d', limit=1000)
```

CoinGecko Demo (free): 30 calls/minute, 10,000 monthly calls. Excellent for metadata, market caps, supplementary verification. Analyst tier ($129/month): 500 calls/minute, 11+ years history, commercial usage rights. Coverage: 24M+ tokens across 250+ networks.

CoinMarketCap free tier: Current prices only, no historical data. Startup tier ($79/month minimum) required for historical OHLCV. Not recommended given CoinGecko's superior free offering.

THREE BUDGET STACKS WITH IMPLEMENTATION PRIORITY

$0/Month Stack: Comprehensive Free Foundation

Tool	Category	Coverage	Implementation
Coinalyze API	Derivatives	100+ perpetuals	Week 1
CCXT + Binance	Spot OHLCV	500+ pairs, 2017+	Week 1
DefiLlama API	DeFi TVL/revenue	All major protocols	Week 1
Artemis Lite	Protocol fundamentals	SOL, AVAX, LINK, L2s	Week 2
CoinGecko Demo	Market metadata	24M+ tokens	Week 2
BitInfoCharts	PoW chain data	BTC, BCH, LTC hash rates	Week 1

What you get: Full derivatives coverage (funding, OI, liquidations), comprehensive OHLCV history, DeFi TVL/revenue tracking, protocol fundamentals for smart contract platforms, PoW mining metrics. **Critical gap:** Limited on-chain fundamentals (active addresses, transaction volume, holder distribution) beyond free-tier constraints.

Under $100/Month Stack: Production-Grade Infrastructure

Tool	Monthly Cost	Purpose
All free tier tools	$0	Foundation layer
Santiment Pro	$49	Comprehensive on-chain (2,000+ pairs)
CoinGlass Hobbyist	$29	Production derivatives + heatmaps
Total	**$78/month**	

Why these upgrades: Santiment provides systematic on-chain coverage across major altcoins (active addresses, transaction volume, exchange flows, holder distribution). CoinGlass delivers production-grade derivatives API with liquidation heatmap visualization. Combined with free-tier tools, this stack provides:

- Derivatives microstructure (funding, OI, liquidations) across 100+ markets
- On-chain fundamentals (addresses, transactions, flows) for BTC, ETH, SOL, AVAX, BCH, LINK, 2,000+ assets
- DeFi protocol metrics (TVL, revenue, fees) via DefiLlama
- Spot price data (OHLCV) via CCXT/Binance with 2017+ history

Implementation sequence:

1. Week 1: Sign up for Santiment 14-day trial, deploy Coinalyze API
2. Week 2: Set up CCXT pipeline, evaluate Santiment coverage during trial
3. Week 3: Add CoinGlass if production publishing begins
4. Week 4: Commit to Santiment Pro if coverage meets systematic needs

Under $350/Month Stack: Institutional-Grade Coverage

Tool	Monthly Cost	Purpose
All free tier tools	$0	Foundation layer
Santiment Pro	$49	Altcoin on-chain
CoinGlass Startup	$79	Higher rate limits (80/min)
CryptoQuant Advanced	$39	BTC exchange flows, miner data
CoinGecko Analyst	$129	Commercial OHLCV, 500 calls/min
Messari Pro	$25	Qualitative research, screening
Total	**$321/month**	

What this adds: CryptoQuant enhances BTC-specific macro positioning analysis (exchange flows, miner capitulation). CoinGecko Analyst provides commercial usage rights and higher rate limits. Messari Pro adds qualitative research layer and 175+ metric screening.

What to skip at this budget: Glassnode Professional ($999/month), Token Terminal Pro ($350/month - Artemis Lite covers 95% for free), Nansen ($49/month but wrong asset focus), Laevitas Enterprise ($500/month options-specific).

SHARED INFRASTRUCTURE ECONOMICS

The fragmented vendor landscape creates natural collaboration opportunities. Consider a shared subscription model:

Scenario: Senda + Lighthouse split $321/month institutional stack

- Each party pays $160.50/month
- Both gain full API access to comprehensive infrastructure
- Coordinated vetting eliminates redundant evaluation cycles
- Shared data cleaning pipelines reduce operational overhead

Alternative: Role specialization

- Senda licenses on-chain platforms (Santiment, CryptoQuant)
- Lighthouse licenses derivatives platforms (CoinGlass, Coinalyze Pro if needed)
- Cross-access via shared credentials or data export agreements
- Each organization owns their specialized vertical, collaborates horizontally

IMMEDIATE ACTION ITEMS

Week 1 Implementation:

1. Deploy Coinalyze API for free derivatives coverage (funding, OI, liquidations)
2. Build CCXT + Binance OHLCV pipeline (store locally in Parquet/SQLite)
3. Sign up for Santiment 14-day trial (test on-chain coverage across target assets)
4. Integrate DefiLlama endpoints for TVL/revenue baseline

Week 2-3 Evaluation:

1. Assess Santiment API coverage against systematic research needs
2. Compare Artemis Lite vs Token Terminal Pro for protocol fundamentals
3. Determine if CoinGlass production upgrade justified by publishing cadence

Week 4 Commitment Decision:

1. Commit to Santiment Pro ($49/month) if trial validates systematic coverage
2. Add CoinGlass Hobbyist ($29/month) when client-facing research begins
3. Defer Token Terminal Pro unless protocol fundamentals become revenue-critical focus

> **Recommended starting point:** $78/month production stack (Santiment Pro + CoinGlass Hobbyist) provides systematic derivatives, on-chain, and DeFi coverage across major crypto assets. This delivers institutional-grade data infrastructure at <10% the cost of traditional platforms (Glassnode Pro + CryptoQuant Pro + Token Terminal = $1,400+/month) while maintaining full API access and comprehensive asset coverage.

MACRO, ILLUMINATED.