November 2022
State of the OpenCloud 2022
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We’re Long Cloud-Infrastructure & Open-Source Software
We are long cloud-infrastructure & open-source software

1. Infrastructure-software fundamentals remain resilient despite macro outlook
2. Measured growth is being rewarded over growth at all cost
3. Cloud providers continue to exhibit growth durability and profitability
4. Public cloud-native companies are reaching scale and the private backlog is promising
5. Cloud software is the deflationary force enabling productivity in a high inflation environment
6. Cloud-native is not an option, it’s a necessity
Software revenue multiples are down across the board

Software revenue multiples have compressed from 2021 highs to below the historical average since 2018.

Source: CapIQ
Note: Market data as of 10/25/22
Interest rates and macro sentiment are driving the correction despite stable revenue growth

Rising interest rates have resulted in multiple compression

Company growth forecasts remain healthy

While company fundamentals remain strong, software multiples have compressed as a result of ongoing macro pressures, including rising interest rates.

Source: CapIQ
Note: Market data as of 10/25/22
The tightening of the economy is causing companies to reevaluate their cost structure.

More than 70K positions were eliminated across 400+ companies globally in the last two quarters as companies reevaluate their cost structure in light of macro headwinds.

Sources: https://layoffs.fyi/
Note: * Denotes a past or current Battery company. For a full list of all Battery investments, please click here.
There is pain ahead for private companies

Private Software Companies

1,000+
Global unicorns in the last 10 years

400
$3B average valuation

50
Valuation of $5B+

15
Valuation of $10B+

Public Software Companies

200
Public software companies in the last 10 years

70
$1B+ NTM revenue

60
Valuation of $5B+

40
Valuation of $10B+

Highly-valued software unicorns have a high bar to meet to transition to successful public companies, often requiring a 10x+ revenue ramp and being mindful about margins early on.

Sources: Pitchbook, CapIQ
Note: * Affirm, Akamai, Bob, Cohesity, Collibra, Confluent, Databricks, DataDog, Gong, Nutanix, Pendo, Postman, Sabre, ServiceTitan, Splunk, Workato and 6sense are current or past Battery portfolio companies. For a full list of all Battery investments, please click here. Unicom indicates a valuation of $1B or more. Public companies considered with a minimum market cap of $500M+. Excludes Figma due to announced Adobe acquisition.
The market is shifting from “growth at all cost” to “measured growth”

On a growth-adjusted basis, some of the fastest-growing software companies have been disproportionally penalized as the market rewards profitability and measured growth.

Source: CapIQ
Note: Market data as of 10/25/22
Cloud businesses are core to driving market value

Across infrastructure-software companies, cloud revenue growth far outpaces that of on-prem, and cloud serves as the foundation for long-term sustainable growth.

Source: Company filings and Wall Street research
Note: ¹ Denotes a past or current Battery company. For a full list of all Battery investments, please click here.
Cloud-infrastructure fundamentals remain healthy

### Top 10 Highest-Valued Software Companies by Multiple

<table>
<thead>
<tr>
<th>Company</th>
<th>Cloud Infra?</th>
<th>Market Cap</th>
<th>NTM Rev.</th>
<th>NTM Growth</th>
<th>FCF Margin</th>
<th>Rule of 40</th>
<th>EV / NTM Rev</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNOW</td>
<td>✅</td>
<td>$64,411</td>
<td>$2,517</td>
<td>54%</td>
<td>15%</td>
<td>69</td>
<td>22.5x</td>
</tr>
<tr>
<td>ZC</td>
<td>✅</td>
<td>$18,914</td>
<td>$1,136</td>
<td>40%</td>
<td>2%</td>
<td>42</td>
<td>16.1x</td>
</tr>
<tr>
<td>ZS</td>
<td>✅</td>
<td>$22,701</td>
<td>$1,502</td>
<td>38%</td>
<td>23%</td>
<td>61</td>
<td>15.9x</td>
</tr>
<tr>
<td>DATADOG</td>
<td>✅</td>
<td>$29,636</td>
<td>$1,899</td>
<td>39%</td>
<td>21%</td>
<td>60</td>
<td>15.6x</td>
</tr>
<tr>
<td>ATLASSIAN</td>
<td>✅</td>
<td>$52,533</td>
<td>$3,599</td>
<td>28%</td>
<td>22%</td>
<td>50</td>
<td>15.3x</td>
</tr>
<tr>
<td>ZM</td>
<td>✗</td>
<td>$18,841</td>
<td>$1,241</td>
<td>34%</td>
<td>36%</td>
<td>70</td>
<td>15.0x</td>
</tr>
<tr>
<td>DDOG</td>
<td>✅</td>
<td>$8,189</td>
<td>$495</td>
<td>49%</td>
<td>(8%)</td>
<td>41</td>
<td>14.9x</td>
</tr>
<tr>
<td>CROWDSTRIKE</td>
<td>✅</td>
<td>$38,323</td>
<td>$2,640</td>
<td>44%</td>
<td>29%</td>
<td>73</td>
<td>14.6x</td>
</tr>
<tr>
<td>BILL</td>
<td>✗</td>
<td>$14,445</td>
<td>$968</td>
<td>51%</td>
<td>2%</td>
<td>53</td>
<td>14.6x</td>
</tr>
<tr>
<td>Grazy</td>
<td>✅</td>
<td>$7,355</td>
<td>$542</td>
<td>79%</td>
<td>(15%)</td>
<td>64</td>
<td>12.9x</td>
</tr>
</tbody>
</table>

Top 10 SaaS Avg. 45% 13% 58 15.7x

Broad SaaS Avg. 21% 5% 26 6.0x

### # of $1B+ NTM Revenue Software Companies by IPO Date

- **2000 - 2005:** 3
- **2006 - 2009:** 3
- **2010 - 2013:** 7
- **2014 - 2017:** 14
- **2018 - Current:** 20

The number of $1B+ revenue software companies continues to expand rapidly, and cloud-infrastructure companies, which exhibit healthy growth and profitability at scale, represent 8 of the top 10 most valuable software companies.

Source: CapIQ
Note: Market data as of 10/25/22. † Denotes a past or current Battery company. For a full list of all Battery investments, please click here.
Cloud vendors continue to show growth durability at massive scale despite the current macro environment

Cloud giants have continued to benefit as digital transformation accelerates and more workloads shift to the cloud.

Source: Company filings and Wall Street research.
Note: ¹ Denotes a past or current Battery company. For a full list of all Battery investments, please click here.
Cloud leaders are demonstrating growth with attractive margin profiles

<table>
<thead>
<tr>
<th></th>
<th>Q2’21</th>
<th>Q2’22</th>
<th>Q2’21</th>
<th>Q2’22</th>
<th>Q2’21</th>
<th>Q2’22</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annualized Cloud Revenue</strong></td>
<td>$59B</td>
<td>1.3x</td>
<td>$79B</td>
<td></td>
<td>$37B</td>
<td>1.4x</td>
</tr>
<tr>
<td><strong>Illustrative Multiple</strong></td>
<td>8.0x</td>
<td></td>
<td>8.0x</td>
<td>8.0x</td>
<td>8.0x</td>
<td></td>
</tr>
<tr>
<td><strong>Implied Cloud Valuation</strong></td>
<td>$474B</td>
<td>1.3x</td>
<td>$632B</td>
<td></td>
<td>$296B</td>
<td>1.4x</td>
</tr>
<tr>
<td><strong>Cloud Contribution to Enterprise Value</strong></td>
<td>27%</td>
<td>1.8x</td>
<td>48%</td>
<td></td>
<td>15%</td>
<td>1.5x</td>
</tr>
<tr>
<td><strong>Cloud GAAP Operating Margin</strong></td>
<td>28%</td>
<td>1%</td>
<td>29%</td>
<td></td>
<td>45%</td>
<td>(3%)</td>
</tr>
</tbody>
</table>

On a combined basis, cloud represents 28% of Amazon, Microsoft and Google’s enterprise value, up from 17% in the year prior.

Source: Company filings and Wall Street Research
Note: Market data as of 10/25/22. MSFT cloud revenue represents Azure estimates while cloud GAAP operating margin represents Intelligent Cloud as reported.
We’re in the early innings of cloud adoption

Cloud penetration is rapidly expanding with ample room to grow. In 2022, cloud spend is expected to represent ~25% of the $919B overall infrastructure spend.

Source: Gartner
Note: IaaS + PaaS includes revenue from AWS, Azure, Google Cloud, AliCloud, Salesforce/Heroku, Tencent, Oracle, Digital Ocean, and other cloud companies.
Cloud software is the deflationary force enabling productivity in a high inflation environment.

Cloud software is the counterbalance to periods of labor shortages, driving increased productivity from existing resources and acting a source of deflationary pressure.

Operational Best Practices for OpenCloud Companies
COVID-19 shifted the valuation slope, but the end state for healthy companies remains the same.

COVID-19 and the cheap capital environment shifted the slope of the s-curve and resulting valuations, but the path to a lasting business remains the same.
Product is playing an outsized role in the buyer journey, but there’s no one size fits all.

<table>
<thead>
<tr>
<th></th>
<th>Product-Led Growth</th>
<th>Product-Assisted Growth</th>
<th>Sales-Influenced Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Customer Profile</strong></td>
<td>Individuals</td>
<td>Teams</td>
<td>Organizations</td>
</tr>
<tr>
<td><strong>User / Champion</strong></td>
<td>Buyer</td>
<td>Influencer</td>
<td>POC / Limited Role</td>
</tr>
<tr>
<td><strong>Customer Acquisition</strong></td>
<td>Organic / Growth-led</td>
<td>Marketing-led</td>
<td>Sales-led</td>
</tr>
<tr>
<td><strong>Lead Generation</strong></td>
<td>PQL</td>
<td>PQL / MQL</td>
<td>Named Accounts</td>
</tr>
<tr>
<td><strong>Sales Team Involvement</strong></td>
<td>Self-Serve</td>
<td>Inside Sales</td>
<td>Enterprise Rep</td>
</tr>
<tr>
<td><strong>Sales Cycle</strong></td>
<td>Days</td>
<td>Months</td>
<td>Quarters</td>
</tr>
<tr>
<td><strong>Success Metrics to Track</strong></td>
<td>New Customer Lands</td>
<td>ARR &amp; Expansion</td>
<td>ACV &amp; Contract Duration</td>
</tr>
</tbody>
</table>

| Example Companies         | ATLASIANN         | snyk                   | snowflake               | databricks              | Collibra               | CROWDSTRIKE            | servicenow             | paloalto              |

There are different paths to optimizing the first $100M; beyond that, product-assisted and sales-influenced growth can go hand-in-hand.

Source: Company filings
Note: * Denotes a past or current Battery company. For a full list of all Battery investments, please click [here](#).
3 Rise of go-to-market strategies based on buyer preference

The demand-gen funnel is increasing in complexity with more customer engagement touchpoints than ever before; with complexity comes opportunity.

Stages
1. Interest
2. Qualifying Intent
3. In Play
4. Monetizable

Legacy Demand Funnel
- Outbound / Inbound
- Sales Qualified Leads (SQLs)
- Actionable Opportunity
- Monetizable

Cloud-Native Demand Funnel
- Outbound
- Inbound
- Product
- Channel
- Community
- Named Accounts
- Mktg. Qualified Leads
- Product Assisted Leads
- Sales Assisted Leads
- Channel Assisted Leads
- Sales Qualified Leads (SQLs)
- Product Qualified Leads (PQLs)

A
B

WON
WON
Cloud-native demand funnel can be both marketing & product driven

**Critical Considerations:**
- Robust nomenclature of stages matters
- Product-led converts PQLs at 3x higher due to buyer intent and interaction
- Product-led amplifies marketing-led growth when combined
- Measure lead quality by channel

**Additional Metrics that Matter:**
- End-to-end efficiency
- Sales velocity (ex. closed in qtr.)
- Sales cycle
- Average deal value
- Pipeline generation and aging – logos and dollars

Combining marketing-led and product-led growth is a powerful force multiplier to your GTM engine with the product-led funnel converting 3x faster while being more efficient.
## 5 Product marketing playbooks to match sales qualification and customer LTV

<table>
<thead>
<tr>
<th>Buyer Segment</th>
<th>Sales Playbook</th>
<th>Next Best Action</th>
<th>Land</th>
<th>Expand &amp; Renew</th>
<th>Example Customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global 10K</td>
<td>Sales-led</td>
<td>Product Trial / PoC</td>
<td>PAYG / Consumption</td>
<td>Multi Year Exp. Deal</td>
<td>J.P. Morgan, Goldman Sachs, TOYOTA, Walmart</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Procurement / Business Value Assessment</td>
<td>Annual Commitment</td>
<td>+ Prof. Services</td>
<td></td>
</tr>
<tr>
<td>Mid Market</td>
<td>Product-assisted</td>
<td>Assisted Product Trial</td>
<td>Sales-led / PAYG</td>
<td>Annual Commitment</td>
<td>traba, PicnicHealth, Qualio, PAVE</td>
</tr>
<tr>
<td>Enterprise Department</td>
<td>Sales-supported</td>
<td>Paywall</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMB / Commercial</td>
<td>Product-led</td>
<td>Self-serve Trial</td>
<td>PAYG Purchase</td>
<td>Expand PAYG</td>
<td>Rampay, BUILD, OPS</td>
</tr>
<tr>
<td>Teams, Users</td>
<td></td>
<td>Paywall</td>
<td>Cloud Marketplace</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Align product marketing with sales playbooks to engage customers through the right product marketing channels.
**Align sales comp plans with customers purchase patterns**

**Cloud-Native Sales Comp Maturity**

<table>
<thead>
<tr>
<th>SaaS 1.0: Named Accounts</th>
<th>SaaS 2.0: Land &amp; Expand</th>
<th>Cloud-Native: PAYG / Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Target</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$1.2M ARR</td>
<td>$1.2M ARR</td>
<td># of logos (ex. New, Ent., Workloads)</td>
</tr>
<tr>
<td><strong>Attainment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>80% ($1.0M)</td>
<td>80% ($1.0M)</td>
<td>Logo acquisition + ARR</td>
</tr>
<tr>
<td><strong>Ramp</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 – 12 Months</td>
<td>9 Months (0%, 50%, 100%)</td>
<td>9 Months (0%, 50%, 100%)</td>
</tr>
<tr>
<td><strong>Quota Terms</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Year (lumpy</td>
<td>Q4 loaded)</td>
<td>Quarterly (AE) or Monthly (ISR)</td>
</tr>
<tr>
<td><strong>Focus</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross New ARR</td>
<td>Net New ARR (i.e., net of churn)</td>
<td>Land deals + Exp. within 1st yr.</td>
</tr>
<tr>
<td><strong>Structure</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multi-year TCV commitments</td>
<td>Hunter / farmer sales separation</td>
<td>PAYG + kicker for commit deals</td>
</tr>
<tr>
<td><strong>LTV: CAC: LTV:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.5 – 2.0x</td>
<td>2.0 – 3.0x</td>
<td>5.0x+</td>
</tr>
</tbody>
</table>

Incentivize your sales team to focus on landing and acquiring new customers with flexible deal structures. Product hooks will naturally expand usage with quick time to value.
Highly-qualified product lands can drive 10x – 50x expansions over time

$100K+ Customer Contribution

Customer quality matters, even PAYG deals with large customers will compound over time with efficiency.

Source: Company filings
Note: ¹ Denotes a past or current Battery company. For a full list of all Battery investments, please click here.
8 Expansion is critical to compounding ARR growth

Tier 1 (130%+ NDR)
- Confluent
- Datadog
- Snowflake
- GitLab
- JFrog
- UiPath
- HashiCorp
- SentinelOne

Tier 2 (120% - 130% NDR)
- Dynatrace
- PagerDuty
- Elastic
- New Relic
- Cloudflare
- Okta
- Splunk
- Twilio
- Alteryx
- Zscaler
- CrowdStrike
- MongoDB

Tier 3 (110% - 120% NDR)
- Zoominfo
- Fastly
- PingIdentity
- DOJO
- DigitalOcean
- Appian
- Sumo Logic
- Couchbase

High NDR is the cornerstone of efficiency and profitability.

Source: Company filings.
Note: * Denotes a past or current Battery company. For a full list of all Battery investments, please click here.
### Alignment of Pricing “Unit” with Customer “Perceived” Value

<table>
<thead>
<tr>
<th>Pricing model</th>
<th>Consumption-based</th>
<th>Per endpoint</th>
<th>Per host</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perceived ROI</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High-quality, data-driven insights / predictions</td>
<td>Enhanced endpoint visibility and breach prevention</td>
<td>Greater visibility into application / infrastructure performance</td>
<td></td>
</tr>
<tr>
<td><strong>Net-dollar retention</strong></td>
<td>171%</td>
<td>120%+</td>
<td>130%+</td>
</tr>
<tr>
<td><strong>LTM revenue scale / growth</strong></td>
<td>$1,638M / 92%</td>
<td>$1,834M / 61%</td>
<td>$1,366M / 79%</td>
</tr>
<tr>
<td><strong>LTM non-GAAP gross margin</strong></td>
<td>71%</td>
<td>77%</td>
<td>80%</td>
</tr>
<tr>
<td><strong>ACV</strong></td>
<td>$292K</td>
<td>$103K</td>
<td>$77K</td>
</tr>
</tbody>
</table>

Source: Company filings.

Note: ACV calculated as annualized revenue / # of customers. CRWD ACV represents subscription ACV. *¹ Denotes a past or current Battery company. For a full list of all Battery investments, please click [here](#).

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Value-based pricing lowers the barriers to adoption and drives natural expansion.
SBC is a real business expense

While stock-based compensation is not a cash expense, it is not free and should be managed closely to limit the dilution to existing shareholders.

Source: Company filings.
Note: * Denotes a past or current Battery company. For a full list of all Battery investments, please click here.
Building a Lasting Public Company: Focus on KPIs that Matter
Index to the cloud and know your cloud metrics fundamentals

Software valuations are driven by sustainable growth with a path to profitability.

Source: Company filings and CapIQ. Note: Market data as of 10/25/22 and represents select public infrastructure software companies. Note: ¹ Denotes a past or current Battery company. For a full list of all Battery investments, please click here.
EV / revenue / growth levels the playing field

Adjusting the revenue multiple for growth provides insight into the relative value; however, analysts continue to underestimate the growth potential of cloud-infrastructure businesses.

Source: Company filings and CapIQ. Note: Market data as of 10/25/22 and represents select public infrastructure software companies. Note: ¹ Denotes a past or current Battery company. For a full list of all Battery investments, please click here.
Rule of 40 measures efficiency

As software businesses mature and growth naturally slows, improving profit margins is integral to driving free-cashflow generation and sustaining the rule of 40 over time.

Source: Company filings and CapIQ. Note: represents select public infrastructure software companies. Note: * Denotes a past or current Battery company. For a full list of all Battery investments, please click here.
Cloud-infrastructure markets are large and growing; companies attached to these mega trends are experiencing the benefits of these tailwinds.

¹ Denotes a past or current Battery company. For a full list of all Battery investments, please click here. Source: Company filings. Excludes ForeScout, SailPoint, Carbon Black, and Nutanix due to lack of disclosed metrics. Talend financials based on constant currency.
Average magic number over the last twelve months at IPO

Product-led growth and bottoms-up are enabling companies to be more efficient in customer acquisition.

* Denotes a past or current Battery company. For a full list of all Battery investments, please click here. Note: Magic number calculated as \(((Q(t) – Q(t-1)) / S&M Q(t-1)) * 4\). ARR used instead of subscription revenue if disclosed. Source: Company filings. Excludes ForeScout, SailPoint, Carbon Black, and Nutanix due to lack of disclosed metrics. Ping Identity, Dynatrace, and SolarWinds exclude amortization/depreciation of acquired assets and restructuring costs. Talend financials based on constant currency.
Dollar-based net retention at IPO

Bottoms-up and transaction-based revenue streams have far more consistency and expansion potential than we all anticipated.

¹ Denotes a past or current Battery company. For a full list of all Battery investments, please click here. Source: Company filings. Excludes ForeScout, SailPoint, Carbon Black, and Nutanix¹ and C3 due to lack of disclosed metrics.
LTV:CAC at IPO

Efficient customer acquisition while focusing on enterprise-grade customers results in higher expansion potential.

¹ Denotes a past or current Battery company. For a full list of all Battery investments, please click here. Source: Company filings. Excludes ForeScout, SailPoint, Carbon Black, and Nutanix due to lack of disclosed metrics. Ping Identity, Dynatrace, and SolarWinds exclude amortization/depreciation of acquired assets and restructuring costs. Talend financials based on constant currency. LTV calculated as GAAP subscription gross margin / (gross churn (est.) + 11% discount rate). CAC calculated as LTM GAAP S&M exp. / (Qo subscription revenue)*4 – (Q-4 subscription revenue)*4. ARR used instead of subscription revenue if disclosed.
Themes of Interest
A modern web-development ecosystem is emerging to deliver a better developer and end-user experience, shifting the back end to the front end.

Global Professional Developer Population

JavaScript is the Most Widely Adopted Language

<table>
<thead>
<tr>
<th>Language</th>
<th>% of Developer Adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td>JavaScript</td>
<td>56%</td>
</tr>
<tr>
<td>Python</td>
<td>51%</td>
</tr>
<tr>
<td>Java</td>
<td>45%</td>
</tr>
<tr>
<td>C#</td>
<td>32%</td>
</tr>
<tr>
<td>C++</td>
<td>30%</td>
</tr>
</tbody>
</table>

Web-Development Ecosystem

- **Front End Framework**: Svelte, SolidJS, Vue.js, Angular, React, Preact
- **Static Site Generation**: astro, Hugo, Gatsby, NuxtJS, Next.js
- **Run-Time**: Node, Vue, Gatsby, Svelte
- **Headless CMS**: Strapi, Ghost, Directus, Sanity, Contentful
- **Managed Deployment**: Vercel, Netlify, Fastly, Cloudflare, Gatsby Cloud
- **Database Abstraction**: Convex, Appwrite, Prisma, Supabase, Hasura

Higher levels of abstraction are allowing web developers to own more of the end-to-end workflow, enabling front end developers to own more of the development process.

Source: Developer Nation
Note: ¹ Denotes a past or current Battery company. For a full list of all Battery investments, please click [here](#).
Machine learning is going real time

As ML adoption continues to mature, more companies are deploying models to power mission-critical operational use cases, driving the need for real-time capabilities for greater accuracy / reliability and a shorter feedback loop.
ML and AI shifting from predictive to generative, disrupting existing application workflows

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Fundamental Model Layer</th>
<th>Use Cases</th>
<th>Select Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compute / Hardware</td>
<td>OpenAI GPT-3</td>
<td>Marketing</td>
<td>copy.ai</td>
</tr>
<tr>
<td>NVIDIA</td>
<td>Amazon</td>
<td>BLOOM</td>
<td></td>
</tr>
<tr>
<td>GRAPHCORE</td>
<td>Google Cloud</td>
<td>Stable Diffusion</td>
<td></td>
</tr>
<tr>
<td>Azure</td>
<td>Paperspace</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data-Centric AI Tooling</td>
<td></td>
<td>Support</td>
<td></td>
</tr>
<tr>
<td>Galileo</td>
<td>Heartex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lightly</td>
<td>Labelbox</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Galileo</td>
<td>Heartex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scale</td>
<td>Snorkel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DeepMind</td>
<td>PALM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OpenAI DALLE-2</td>
<td></td>
<td>Code &amp; Documentation</td>
<td></td>
</tr>
<tr>
<td>AI21 labs</td>
<td></td>
<td>Image &amp; Video</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Voice &amp; Audio</td>
<td></td>
</tr>
</tbody>
</table>

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Generative AI is at an inflection point, and advancements across core infrastructure / models have created an opportunity at the application layer to upend existing workflows.
The cloud is upending the security stack

- Infrastructure
  - Wiz
  - Lacework
  - orca security
  - bridgecrew
  - PRISMA
  - aqua
  - SentinelOne
  - sysdig
  - CROWDSTRIKE
  - DATADOG
  - Panther

- Identity & Network
  - Auth0
  - okta
  - ForgeRock
  - axis security
  - STYTCH
  - styra
  - DATADOG
  - Transmit

- Applications
  - Snyk
  - CONTRAST Security
  - Checkmarx
  - cycode
  - VERACODE
  - Snyk
  - Semgrep
  - BIONIC
  - noname
  - SALT

- Data
  - Normalyze
  - POLAR
  - Laminar
  - sentra
  - eureka
  - Dig
  - Material Security
  - Abnormal

Governance & Compliance
- AXONIUS
- resmo
- JupiterOne
- CloudQuery
- DRA
- Vanta
- Secureframe
- AUDITBOARD

Note: * Denotes a past or current Battery company. For a full list of all Battery investments, please click here.
The new wave of Web3 tooling is shifting from building the network and protocol infrastructure to reading and acting on it.

Building networks / protocols

Understanding and acting on insights

Protocols
- ethereum
- polygon
- OPTIMISM
- Avalanche
- SOLANA
- APTES

Node Providers
- alchemy
- BLOCKDAEMON
- Ankr
- QuickNode
- INFURA

Developer Toolkit
- Truffle
- Hardhat
- REMIX
- argent
- TATUM
- metamask
- moralis

Security & Identity
- Spruce
- Fireblocks
- Forta
- zoltar
- teuffle
- Kurtosis

Simulation & Testing
- tenderly
- METRIKA
- EPNS
- Blocktorch

Monitoring & Alerts
- Blocknative
- Dialect
- nansen
- TRM
- Chainalysis
- Dune Analytics
- merlin

Growing interest and adoption of Web3 has made it critical to continuously monitor and interpret what is happening on the blockchain and act on it in near real time.

Note: * Denotes a past or current Battery company. For a full list of all Battery investments, please click here.
Future of OpenCloud
The emerging set of open-source and cloud-native companies are promising

Select Private Unicorns

<table>
<thead>
<tr>
<th>Company</th>
<th>Last Disclosed Valuation</th>
</tr>
</thead>
<tbody>
<tr>
<td>databricks¹</td>
<td>$38.0</td>
</tr>
<tr>
<td>celonis</td>
<td>$13.0</td>
</tr>
<tr>
<td>TANiUM²</td>
<td>$9.0</td>
</tr>
<tr>
<td>snyk</td>
<td>$8.6</td>
</tr>
<tr>
<td>Chainalysis</td>
<td>$8.6</td>
</tr>
<tr>
<td>Lacework</td>
<td>$8.3</td>
</tr>
<tr>
<td>Fireblocks</td>
<td>$8.0</td>
</tr>
<tr>
<td>netskope</td>
<td>$7.5</td>
</tr>
<tr>
<td>Scale</td>
<td>$7.3</td>
</tr>
<tr>
<td>GONG¹</td>
<td>$7.3</td>
</tr>
<tr>
<td>1Password</td>
<td>$6.8</td>
</tr>
<tr>
<td>Wiz²</td>
<td>$6.0</td>
</tr>
<tr>
<td>Grafana</td>
<td>$6.0</td>
</tr>
<tr>
<td>workato¹</td>
<td>$5.7</td>
</tr>
<tr>
<td>Fivetran</td>
<td>$5.6</td>
</tr>
<tr>
<td>Postman¹</td>
<td>$5.6</td>
</tr>
<tr>
<td>Collibra¹</td>
<td>$5.3</td>
</tr>
<tr>
<td>dataiku¹</td>
<td>$4.7</td>
</tr>
</tbody>
</table>

Open-source and cloud financings have continued to accelerate, and there is a healthy backlog of private company unicorns gearing up for IPO.

Source: Pitchbook data as of 10/11/2022. Select Private Unicorns based on private companies that are enterprise infrastructure-focused with valuations of $4.0B or greater as of October 2022.

Note: ¹ Denotes a past or current Battery company. For a full list of all Battery investments, please click here.
Open-source and cloud-native companies continue to grow at healthy rates

The last few years have created multiple open-source and cloud-native companies that have grown rapidly since IPO and are expected to double Y/Y to $25B in cumulative revenue run rate by 2023.

### Run-Rate Revenue ($M)

#### IPO to CY23E

<table>
<thead>
<tr>
<th>Year</th>
<th>Company</th>
<th>IPO</th>
<th>Current</th>
<th>CY23E</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>Twilio</td>
<td>237</td>
<td>3,773</td>
<td>5,534</td>
<td>50%</td>
</tr>
<tr>
<td>2017</td>
<td>Snowflake</td>
<td>533</td>
<td>1,989</td>
<td>3,548</td>
<td>74%</td>
</tr>
<tr>
<td>2018</td>
<td>CrowdStrike</td>
<td>322</td>
<td>2,141</td>
<td>3,414</td>
<td>62%</td>
</tr>
<tr>
<td>2018</td>
<td>Okta</td>
<td>195</td>
<td>1,807</td>
<td>2,506</td>
<td>45%</td>
</tr>
<tr>
<td>2019</td>
<td>Datadog</td>
<td>333</td>
<td>1,625</td>
<td>2,431</td>
<td>50%</td>
</tr>
<tr>
<td>2018</td>
<td>Zscaler</td>
<td>180</td>
<td>1,272</td>
<td>1,878</td>
<td>49%</td>
</tr>
</tbody>
</table>

#### IPO to CY23E

<table>
<thead>
<tr>
<th>Year</th>
<th>Company</th>
<th>IPO</th>
<th>Current</th>
<th>CY23E</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>MongoDB</td>
<td>142</td>
<td>1,215</td>
<td>1,697</td>
<td>47%</td>
</tr>
<tr>
<td>2017</td>
<td>Elastic</td>
<td>195</td>
<td>1,000</td>
<td>1,458</td>
<td>45%</td>
</tr>
<tr>
<td>2018</td>
<td>Confluent</td>
<td>308</td>
<td>558</td>
<td>863</td>
<td>45%</td>
</tr>
<tr>
<td>2019</td>
<td>SentinelOne</td>
<td>150</td>
<td>410</td>
<td>793</td>
<td>87%</td>
</tr>
<tr>
<td>2020</td>
<td>Gitlab</td>
<td>233</td>
<td>404</td>
<td>664</td>
<td>54%</td>
</tr>
<tr>
<td>2020</td>
<td>Jfrog</td>
<td>146</td>
<td>271</td>
<td>397</td>
<td>33%</td>
</tr>
</tbody>
</table>

### Source

CapIQ, company filings.

Note: Representative companies include cloud infrastructure and software companies that have gone public since 2016. ¹ Denotes a past or current Battery company. For a full list of all Battery investments, please click here.
We’re still in the early innings for OpenCloud

Source: Battery Ventures; Forrester; Gartner; the Yankee Group; BEA.gov; Input Research.
Note: ¹ Denotes a past or current Battery company. For a full list of all Battery investments, please click here.
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