

DRAFT



OPEN SOURCE

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Commercial Open Source

A Developer Lead Coup That Took Over the Infrastructure Software Market

March 2021

OPEN SOURCE SOFTWARE (OSS) – EXECUTIVE SUMMARY

Open Source approach is proven to accelerate adoption that can be converted to commercial pursuits



Powerful Response to Proprietary Software

Open source solutions are transforming the way software applications are developed and deployed as they help enterprises minimize the cost of application development and avoid vendor lock-in



Community to Commercialization Roadmap

There is a clear path that defines OSS prerequisites to commercial success, proven licensing and monetization models that are producing a growing number of tech unicorns



Growing interest in Cloud-Hyperscalers “Paying Their Fair Share” for OSS

There is a growing movement toward new licensing models geared at capturing greater revenue from the Tech Titans of the SaaS and Public Cloud world



Path to Open Source Success Involves Careful Navigation

Too much focus on commercialization can put the OSS project community at risk. Not all OSS Projects with a solid market fit have Enterprise buyers for the solution



Investment in OSS Continues to be Robust

According to an Andreessen Horowitz report, OSS companies have raised over \$10B in capital with a trend towards bigger and bigger deals

Global Open Source Services Market was valued at \$12.68 Billion in 2018 and is projected to reach \$66.05 Billion by 2026, growing at a CAGR of 22.94% from 2019 to 2026

- Verified Market Research

IMPACT OF OSS ON M&A AND PRIVATE PLACEMENTS






Open Source Software companies are highly investable at all stages from early stage VC to growth capital through IPO / Strategic Exit

- **Understanding New Metrics:** The OSS model was born from rebellion and has disrupted traditional ways of investing in software and software businesses. Metrics like community engagement (GitHub stars / rankings) to numbers of active contributors / maintainers are assessed along side more traditional success measures by savvy investors
- **Growing Investment Interest:** In an already robust investment category, annual invested capital in open-source and related dev tool startups has increased at a roughly 10% CAGR over the last five years, according to data from Crunchbase
- **Success Profile / Returns:** In just the past two years, there has been over \$80 billion in liquidity value generated from the acquisition, merger, and IPOs of open source software-based businesses, according to Bessemer Venture Partners
- **Cautions & Risks:** There are many potential pitfalls in monetizing Open Source Projects. It takes a delicate balance between community and commercialization to create an exceptional business from an Open Source project. This can make investing in OSS companies a tricky proposition but very attractive one when done right







The Co-founder of Cloudera once famously said, "No dominant platform-level software infrastructure has emerged in the last ten years in closed-source, proprietary form."

FERTILE GROUND FOR OPEN SOURCE LARGER DEALS






ACTIVE INVESTORS

 <p>Last Deal: Databand Last Deal Date: Dec 2020</p>	 <p>Last Deal: Starburst Data Last Deal Date: Jan 2021</p>	 <p>Last Deal: Strapi Last Deal Date: May 2020</p>
 <p>Last Deal: Confluent Last Deal Date: Apr 2020</p>	 <p>Last Deal: Anyscale Last Deal Date: Oct 2020</p>	 <p>Last Deal: Solo.io Last Deal Date: Sep 2020</p>













ACTIVE BUYERS

 <p>Last Deal: JClarity Last Deal Date: Aug 2019</p>	 <p>Last Deal: SaltStack Last Deal Date: Sep 2020</p>	 <p>Last Deal: Metricfire Limited Last Deal Date: Sep 2019</p>
 <p>Last Deal: Sonatype Last Deal Date: Nov 2019</p>	 <p>Last Deal: Kontena Last Deal Date: Aug 2018</p>	 <p>Last Deal: MuleSoft Last Deal Date: Mar 2019</p>

NOTABLE FINANCINGS




























Date	Target	Deal Size (\$M)	Funding Type
Feb 2021	 databricks	1,000	Later Stage VC
Jan 2021	 ThoughtWorks	720	PE Growth/Expansion
Oct 2019	 databricks	400	Later Stage VC
Dec 2019	 AUTOMATTIC	381	Later Stage VC
Feb 2021	 AUTOMATTIC	275	Later Stage VC

NOTABLE M&A TRANSACTIONS

Date	Target	Acquirer	EV (\$M)
Oct-2018	 Red Hat	 IBM	33,434
Jun-2018	 GitHub	 Microsoft	7,500
Mar-2018	 MuleSoft	 salesforce	6,579
Nov-2020	 Segment	 twilio	3,200
Dec-2019	 Pivotal	 vmware	2,900
Mar-2019	 SUSE	 ARDIAN	2,800











COMMERCIAL SUCCESS IN OPEN CORE - \$100M+ REVENUE



Solution	Examples Only (includes previously acquired businesses)									
DevOps	 TREASURE DATA Est. \$100M	 puppet Est. \$250M	 HashiCorp Est. \$150M	 docker Est. \$100M	 CloudBees Est. \$100M	 GitHub Est. \$400M	 rackspace Est. \$4B	 fastly Est. \$200M	 Pivotal Est. \$3.5B	 nicira Est. \$2B
Data Platforms	 redislabs HOME OF REDIS Est. \$100M	 neo4j Est. \$100M	 MySQL Est. \$1B	 mongoDB Est. \$400M	 DATASTAX Est. \$150M	 Couchbase Est. \$100M	 MuleSoft Est. \$700M	 talend Est. \$200M	 elastic Est. \$400M	 CONFLUENT Est. \$300M
Analytics	 segment Est. \$150M	 CLOUDERA Est. \$850M	 databricks Est. \$500M	 pentaho Est. \$100M						
Security	 SOURCEfire Est. \$500M	 RAPID7 Est. \$3.7B	 ForgeRock Est. \$200M							

NOTE: Many of the companies referenced herein have been acquired. Revenue estimates as stand alone have been sourced from COCCI

OPEN SOURCE WINNERS – MONETIZATION SUCCESS

Company / OSS Project	Core Solution(s)	Capital Raised (\$M)	Market Valuation (\$B)	Comments:
 Red Hat	Search engine optimization, content marketing, social media marketing	773	32*	Acquired by IBM for \$32B (3x its market cap from 2014)
 MuleSoft	Connect organizational applications, data and devices	480	6.5*	MuleSoft was acquired after going public for \$6.5B
 HashiCorp	Cloud infrastructure automation	350	5.27*	Raised \$175M (Series E) Mar-20
 databricks	Parallel Data Processing Framework	897	28.0*	Raised \$1B (Series G) Feb-21
 CONFLUENT	Handling of real-time data feeds	456	4.5*	Raised \$250M (Series E) Apr-20
 DATASTAX	NoSQL DBMS that distributes data across commodity server farms	190	>1 (\$967M - 2014)	Raised ND Late Stage VC in 2018
 HORTONWORKS	Enterprise-ready open data platforms	435	5.2*	\$5.2B merger with Cloudera
 mongoDB	General-purpose database platform	Public	13.45	
 CLOUDERA	Distributed Storage & Processing	Public	3.69	
 elastic	Big Data Search, Visibility and Security	Public	8.19	

CAN OPEN SOURCE COMPANIES HAVE “SPAC APPEAL”?

As acquisition opportunities in preferred vertical tech sectors like FinTech, HCIT, Gaming, AutoTech, etc. saturate SPACs may look to OSS

Increased Competition / Scarcity: SPACs will be more formidable bidders for private companies, sparking deals that would have come later, driving up volumes and dramatically increasing tech M&A activity. OSS businesses that have successfully navigated early commercialization could be on the SPAC “watch list”

Understanding of OSS Potential: 18% of Tech SPACs are sponsored by a private equity firm. Most sponsors that specialize in Tech SPACs are ex-deal makers hailing from PEs, IBs, or C-Suites of highly acquisitive strategic buyers in their prior life. The emergence of market winners (unicorns) from the OSS domain are well known to these sponsors

IPO Worthy Businesses: Over the seven years from 2013 to 2020, the number of public OSS companies has gone from 5 to 16+

Market Size / Potential: Commercial Open Source Software (COSS) segments have grown from \$10B~ to \$175B+ in total category value

Growth at Scale: COSS companies have reached an attractive scale; GitLab, HashiCorp, Odoo, Databricks, Confluent and many others. All of these companies have reached at least \$100M in revenue and several have achieved \$300M+ in ARR

COSS Media predicts that more COSS companies will enter the public markets via many mechanisms (DL IPO, SPAC IPO, traditional IPO, etc) over the next decade than have gone public since the year 2000

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WHAT IS OPEN SOURCE?



OSS is any type of program or application that developers can inspect, copy, modify, and redistribute



The source code is publicly accessible and allows developers to exchange code and ideas in a transparent and collaborative way and utilize the software to meet their individual business needs. Companies can choose to share their modified source code with the public or keep it to themselves depending on the purpose and the licensing terms of the original project

Licenses delineate policies for modifying and redistributing source code. The two major OSS license types are permissive, which are more liberal in that developers are not required to share their modified code, and copyleft, which are more restrictive by requiring developers to open source all future iterations of the original project



Licenses are used in OSS to dictate how the software can be used

The goal of OSS projects is typically not monetization, but rather to provide solutions to problems

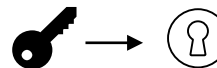


However, when a project provides a solution to a big problem and both demand and the scale of that project grows, a revenue-generating business is established to support its growth with enterprise support to large organizations adopting the software

TEN CRITERIA THAT DEFINE A TRUE OPEN-SOURCE LICENSE

- 1 **Free Redistribution** – third-parties can freely redistribute and resell the software
- 2 **Source Code** should be easily obtainable and unadulterated
- 3 **Derived Works** and modifications permitted
- 4 **Integrity of The Author's Source Code** – author may restrict distribution of modified source code
- 5 **No Discrimination Against Persons or Groups**
- 6 **No Discrimination Against Fields of Endeavor**
- 7 **Distribution of License** (per these terms) applies to all third-parties
- 8 **License Must Not Be Specific to a Product**
- 9 **License Must Not Restrict Other Software**
- 10 **License Must Be Technology Neutral**

THE BIRTH OF OPEN SOURCE SOFTWARE (OSS)



The all-accessible software that emerged as a revolution against closed-source software companies



As recently as five years ago there was fairly widespread skepticism from investors in regard to the viability of open source as a business model

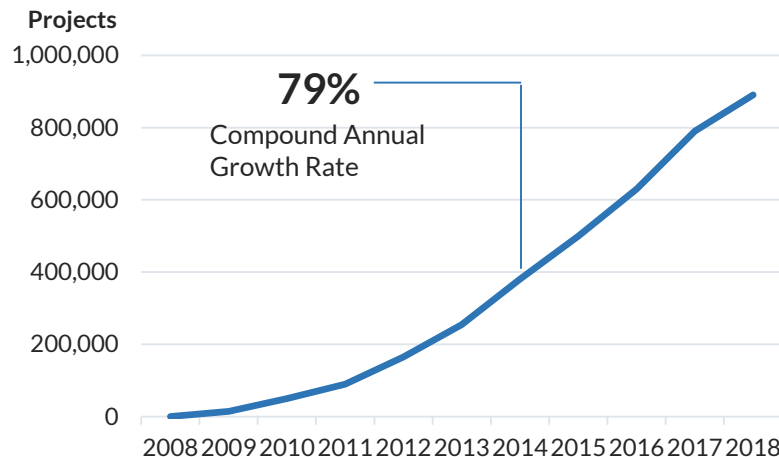


Today there is growing excitement in the space, with notable acquisitions including Red Hat for \$32B, Github for \$7.5B, and MuleSoft for \$6.5B and market cap continuing to rise as OSS companies work through the growth stages of their evolution



Over 30M developers contribute to community-based OS platforms like Github, and the recent acquisitions as well as the massive public market valuations like those of MongoDB (\$7.9B) and Elastic (\$7.3B) indicate that the broader market is worth hundreds of billions

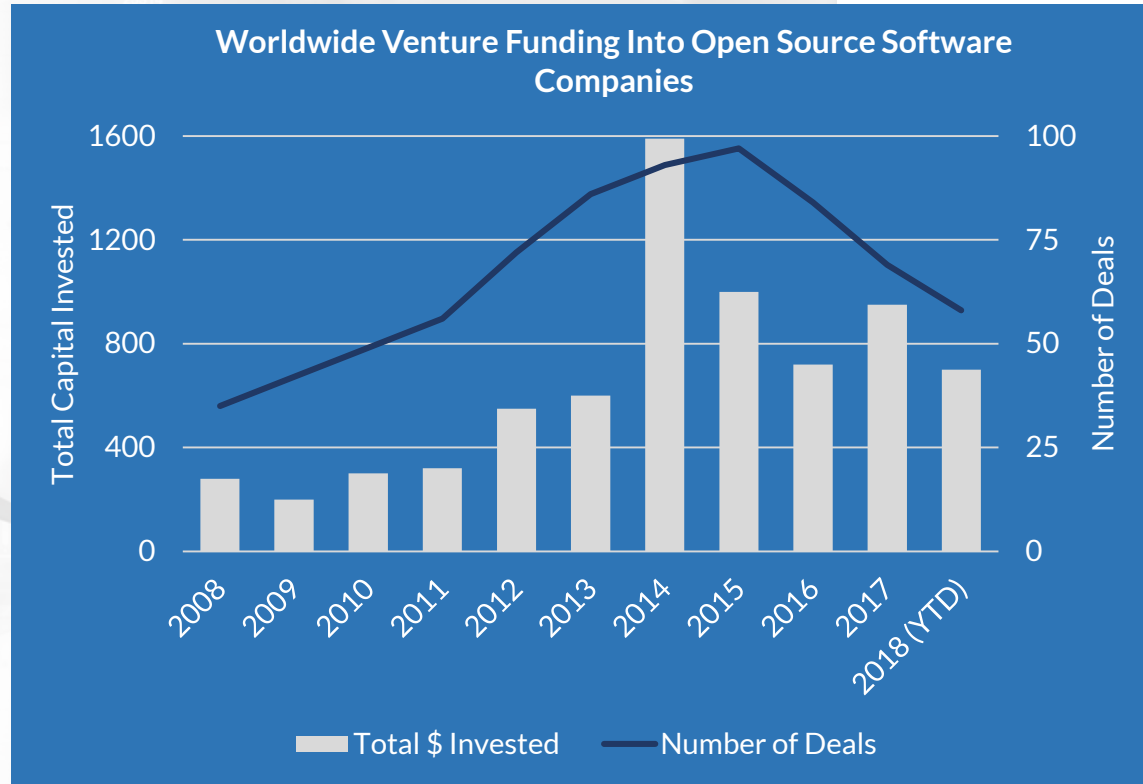
Cumulative Number of OSS Projects Created (2008-2018)



The Open Source Service Market is expected to reach a CAGR of 24.2% during the forecast period (2020-2025). By standardizing open-source platforms such as Kubernetes, developers would be able to implement better ways of using software such as shorter release cycles and incremental changes to the application

THE OPEN SOURCE RENAISSANCE

- In the past 30 years, approximately 200 companies were founded with open source as the core technology, with a particularly notable renaissance for open source in the last 10 years
- Collectively, these companies have raised over \$10B in capital, with three-quarters of the companies and 80% of the capital raised having come about after 2005



OPEN SOURCE – BUSINESS AND TECHNOLOGY DRIVERS

01

Fear [Dependency on Enterprise Software Vendors]

OSS businesses started as projects in response to what was perceived to be unfair or heavy-handed practices and disproportionate profits gained by closed-source software companies, i.e. Microsoft, Oracle, SAP. Ultimately the lack of alternatives concerned enterprise IT and provided the fear factor to start the OSS movement

02

Greed [Huge / Growing Market]

The Enterprise software market is huge and growing, which provides a platform for innovators to capture market share and develop high value businesses. Over the last seven years, OSS has grown from \$10 B to \$175B in total category value

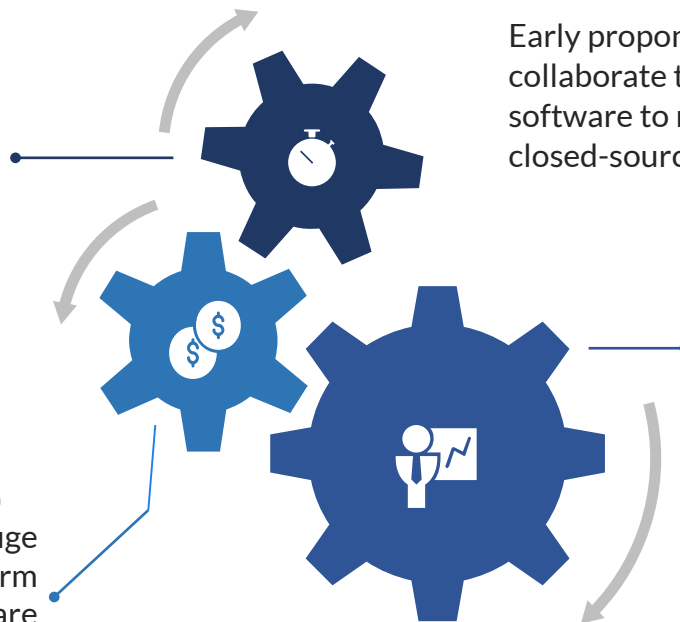
Fear, Greed and Opportunity

Early proponents of freely shareable code collaborate to develop open-source software to rival the restrictive nature of closed-source software

03

Opportunity to Change the Model

Progressive developers began collaborating to author the most broadly used components of software, namely operating systems and databases, that everyone could access, improve, and enhance. Once shown the way by early success stories in OSS, this captured the imagination of a generation of software developers turned entrepreneurs



IMPACT OF COMMERCIALIZATION ON OSS PROJECTS



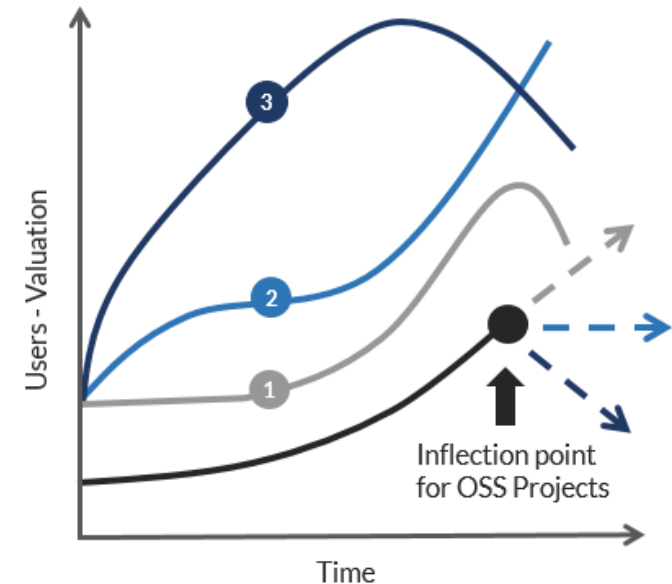
Commercialization Prerequisites for OSS Projects

Broad adoption: The open-source project needs to have a large user base and community

Primary credibility: Credibility with developers is important because it enables the open source company to build an efficient sales and marketing process, which is especially important given historically low, early monetization rates

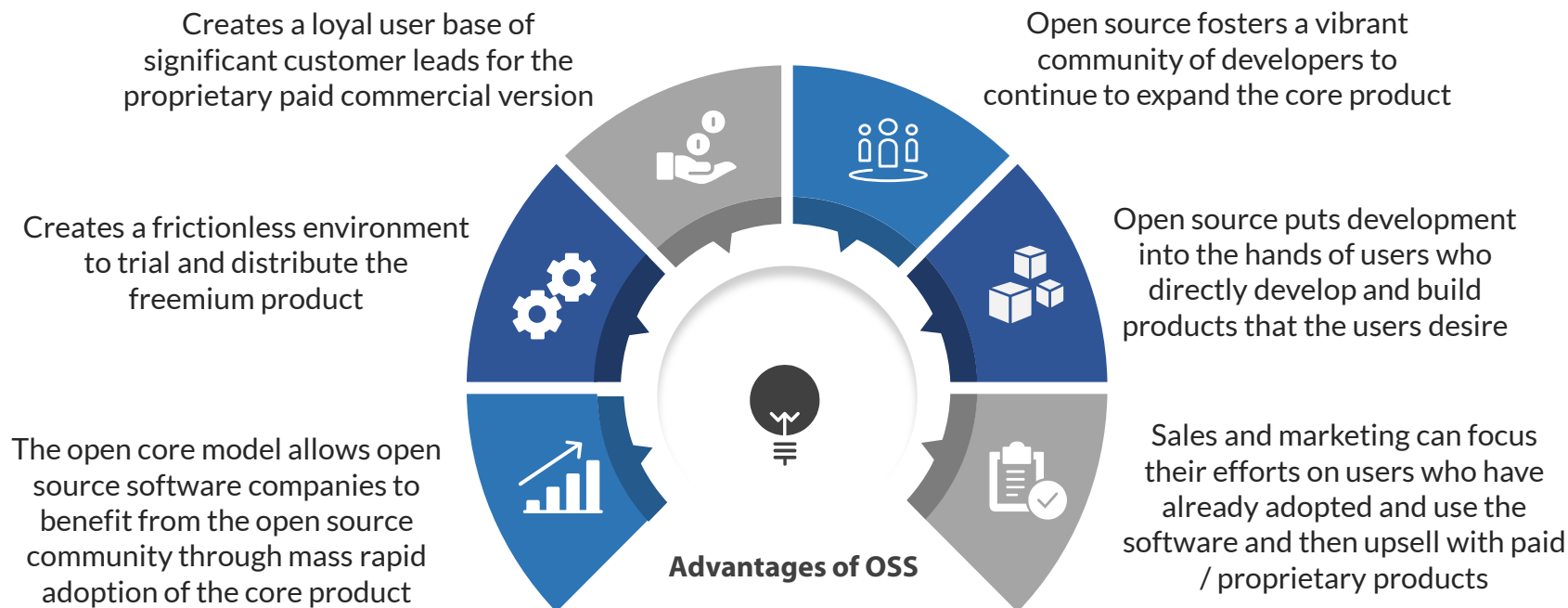
Potential Failure Modes of OSS Commercialization

- 1 **Your OSS User Doesn't Lead to an Enterprise Buyer:** There may be a great product-market but no value-market fit
- 2 **Your OSS Project Growth Falls Behind Your Enterprise Sales:** Product-market fit may not be that great and despite a lack of growth in the OSS project, sales continue to rise
- 3 **Your Enterprise Sales Impacts OSS Community Credibility:** The open source community is largely centered around its principle value of being publicly accessible to all, with the goal of providing solutions as opposed to making a profit



FROM COMMUNITY TO COMMERCIALIZATION

Enormous value has been created from building off of an open source core model



BENEFITS OF OSS AS A BUSINESS MODEL



OSS is sold at a lower cost per unit than CSS

- Since OSS is cheaper, when there is a product-market fit companies gain rapid, widespread adoption, which is how OSS still manages to make up the total market size



OSS companies have a much more simple and efficient go-to-market process

- Much of the initial adoption of OSS results from developers downloading and using the software on their own, which means OSS companies can often bypass both the marketing efforts and the proof-of-concept stage typically required in the sales process
- Instead, all OSS companies have to do is convince their current users to upgrade to an enterprise edition to receive additional features
- As a result, OSS companies have shorter sales cycles, the need for fewer salespeople, quicker payback periods of the cost of selling, and ultimately much less cash consumption than traditional software businesses

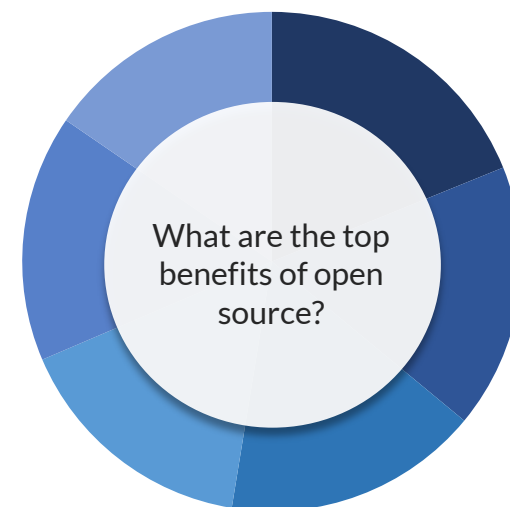
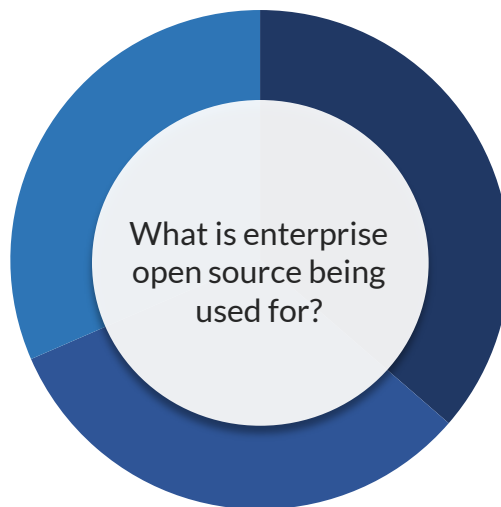
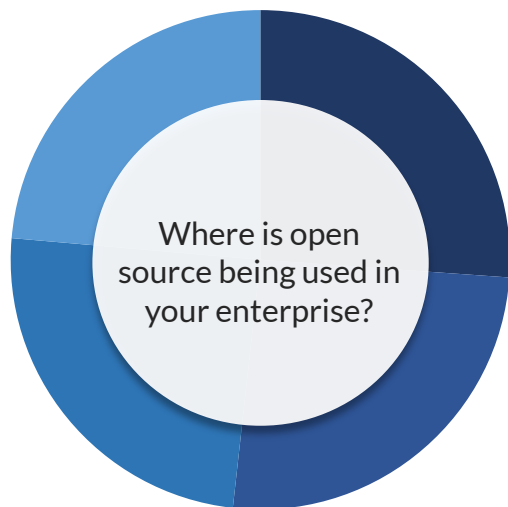


Widely understood and accepted by customers to treat OSS as freemium

- A “freemium” implies that customers can use the product for free until it is deployed in production
- The advantage of this model being that potential customers can read the code of the software for free before deciding whether it can be applied for their own purposes and is worth paying for

FAST FACTS ON OPEN SOURCE

OSS is infiltrating more and more of the tech space, enhancing modernization and digital transformation



52%: Security
51%: Cloud management tools
49%: Database
47%: Big data and analytics

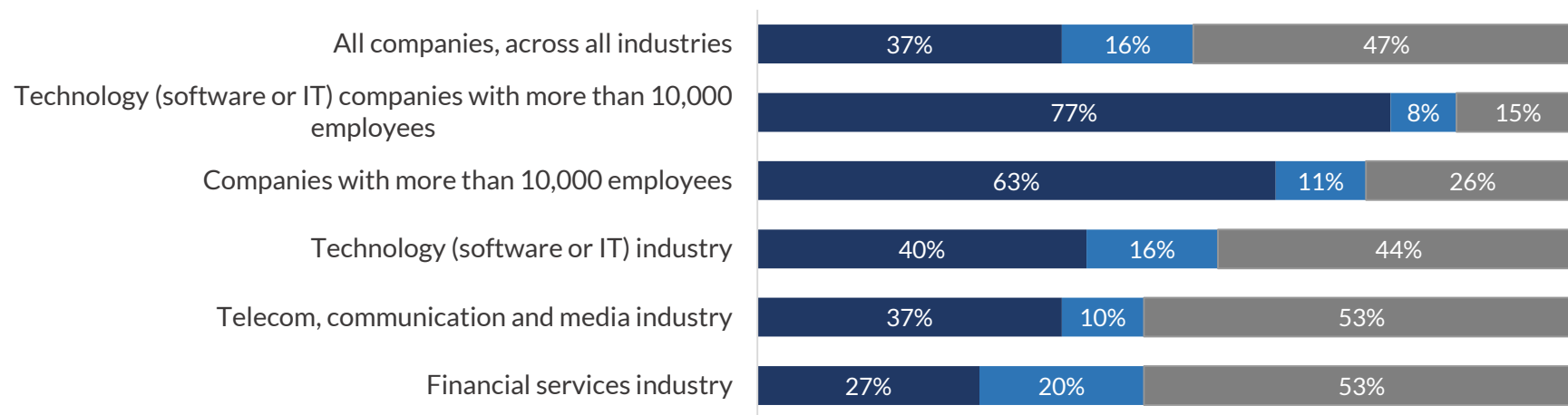
60%: IT infrastructure modernization
53%: Application development
52%: DevOps

33%: Higher quality software
30%: Lower total cost of ownership
29%: Better security
28%: Designed to work in cloud, cloud-native technologies
28%: Ability to safely leverage OS technologies
27%: Access to latest innovations

PREVALENCE OF OSS ACROSS INDUSTRIES

- Large technology companies are decidedly leading the charge in establishing OS programs, followed by telecom, communications and media companies, and financial services companies
- That being said, the penetration of OS is still being felt across all industries, with 37% of all companies across all industries having adopted OS programs

Large Companies, Especially Those at Internet Scale, Most Likely to Have an Open Source Program



■ Yes, we have an open source program

■ We are planning an open source program

■ No, we do not have an open source program

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TYPES OF OPEN SOURCE LICENSE MODELS

OSS Licensing Models



MIT License



GNU General Public License (GPL)



Microsoft Public Licenses (Ms-PL)

CDDL

Common Development and Distribution License (CDDL)



The Apache License

ECLIPSE FOUNDATION

Eclipse Public License (EPL)

BSD

Berkeley Software Distribution (BSD)

01

Copyleft License

An open source license that makes a claim on the copyright of the work, issuing a statement that other people have the right to use, modify, and share the work as long as the reciprocity of the obligation is maintained. In short, if they are using a component with this kind of open source license, then they too must make their code open for use by others as well

Permissive License

A non-copyleft open source license that guarantees the freedom to use, modify, and redistribute, while also permitting proprietary derivative works. Permissive open source licenses place minimal restrictions on how others can use open source components

02



LICENSES

The Server Side Public License (SSPL)

A proprietary/source-available software license developed by MongoDB Inc., and introduced in 2018. Provides the respective vendors behind the core development of these projects more control over how the software is commercialized

03

OPEN SOURCE PROGRESSED – NEXT GENERATIONS

From Open Source to Open Core to SaaS



OPEN CORE

Shifting away from traditional open source principles of being free and accessible to the public and built by a dispersed unaffiliated community of developers, open core is a business model developed within an existing company and used to monetize open source software, making it inherently a blend of open source and proprietary software. While open core software is still free and open source, it offers additional functionality add-on services and features at a premium. There are different variations of “openness” within the open core model depending on strategic business interests



SAAS

Evolving from the open core model, the next generation of open source is developed largely within the confines of businesses and offers its own software as a cloud service from the start, thus becoming open core/cloud service hybrid businesses with various ways to monetize their product. This model essentially combines OSS with commercial software by offering the products as SaaS

OPEN SOURCE MONETIZATION MODELS

Strategy	Description	Examples
Software as a Service (OpenSaaS)	One way to monetize your open source project is by using the SaaS business model. This option makes sense if you have a fully-fledged application capable of generating demand	Wordpress, Sharetribe
Paid support	Many OSS companies succeed by providing extra services, such as technical support, certifications, and trainings	Red Hat, JBoss, and MySQL
Dual licensing	Dual licensing allows companies to release commercial software (with a commercial license) that's derived from free OSS commonly distributed under the GNU General Public (GPL) license	MySQL Enterprise Edition, MySQL Cluster CGE, and MySQL Standard Edition
Cloud / SaaS Licensing	A special case of the Dual Licensing model is the Server Side Public License that is not strictly an open source approved license but used to capture revenue from cloud-based usage of OSS software	Elasticsearch, Kibana and MongoDB
Paid extra features or functionalities	Some companies make money with open source in this way: they distribute their software for free, but charge money for additional features, functionalities, or updates	Github
Paid certification	If software is popular enough, companies can offer certification opportunities for specialists who want to validate their knowledge and skills	Magento and Red Hat offer a variety of certification options

OSS LICENSING TRENDS



Results show that as the use of permissive open source licenses continues to climb, usage of copyleft licenses, especially GPL licenses, continues to decrease

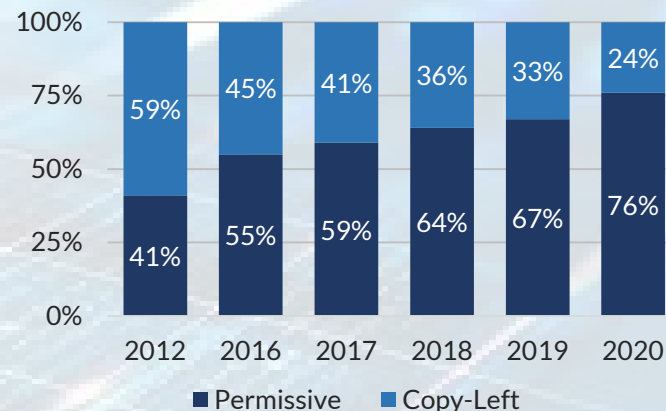


Permissive open source licenses have proven to dominate the sphere, with the Apache 2.0 license and the MIT License gaining far more popularity than the GPL family, and together comprising over 50% of the open source licenses currently in use

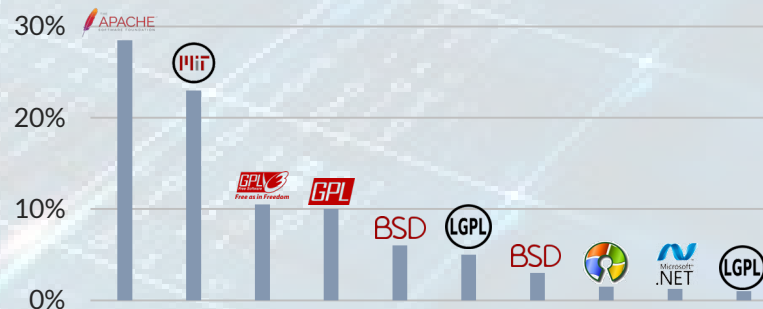


Server Side Public License (SSPL) 1.0 model, which is not officially considered open source, has gained traction but with mixed reception. MongoDB, CockroachDB, Elasticsearch and Kibana have adopted SSPL with the goal of retaining more control over how the software is commercialized. To many, however, SSPL is a rejection of open source principles because it takes away user rights

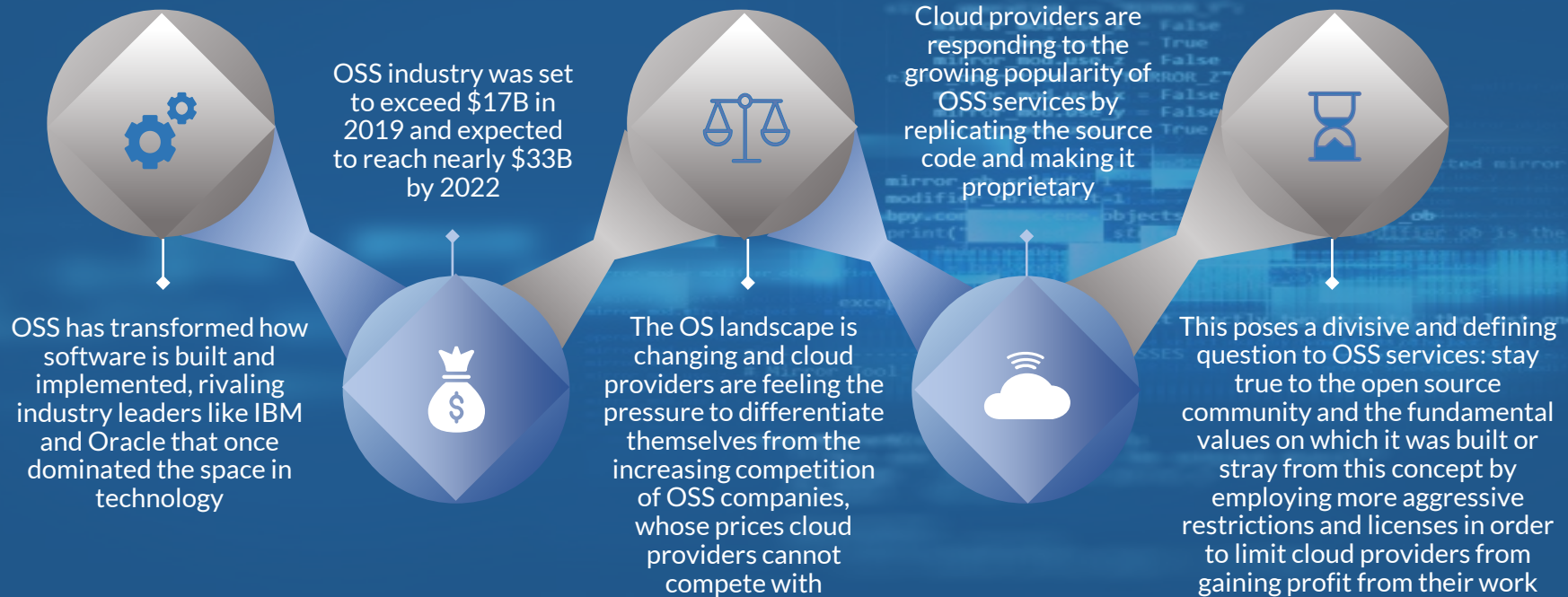
Permissive vs Copyleft Open Source Licenses Over Time



Top 10 Open Source Licenses 2020



WHERE THE OPEN SOURCE INDUSTRY IS HEADED



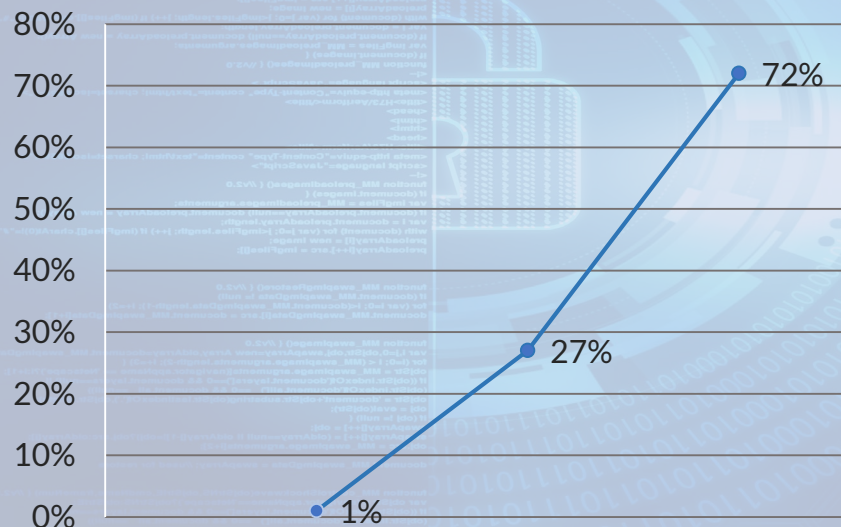
OPEN SOURCE USAGE TODAY AND 12 MONTHS FROM NOW



77%

77% of IT leaders say open source is extremely or very important to their enterprise infrastructure software strategy and will continue to grow over time

Expected Future Change in Use of Open Source over next 12 months



Expected Changes in Software Usage

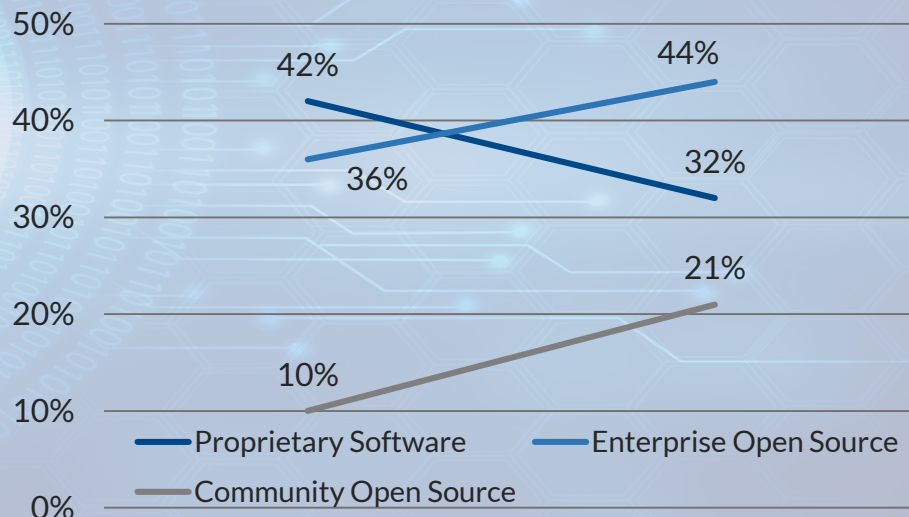


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OPEN SOURCE SOFTWARE LANDSCAPE - DEFINED

ANALYTICS

Open source big data analytics refers to the use of open source software and tools for analyzing huge quantities of data in order to gather relevant and actionable information that an organization can use in order to further its business goals.



DATA PLATFORMS

An open source database and related data platforms have code that is open and free for download, modification and re-use. This is the

opposite of a proprietary or closed source data platforms such as IBM DB2, Oracle and MS SQL in which the code is protected to prevent copying.



BUSINESS APPLICATIONS

Open Source Business applications can include any software or set of computer programs with a broad software license that makes source code available to the general public with relaxed or non-existent restrictions. These applications are generally used by companies to perform various business functions to increase productivity, to measure productivity, and to perform other business functions accurately.

Open Source software tools that enable DevOps, which is a set of all processes and services that are both provisioned by an IT staff for their internal or external clients and used to operate essentially as a business service.



DEVOPS



superior approach to proprietary security software including; encryption, software-defined security orchestration, policy control, etc.

SECURITY

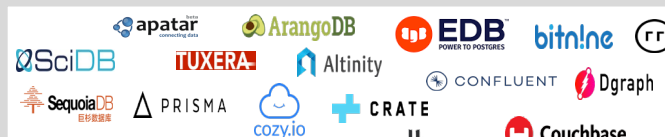
OPEN SOURCE SOFTWARE LANDSCAPE



ANALYTICS



DATA PLATFORMS



BUSINESS APPS



DIVERSIFIED



DEVOPS



SECURITY



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TECH TITANS GROWING STRATEGIC COMMITMENT TO OSS



Microsoft acquired Citus Data, a startup that uses PostgreSQL, a database management system that's popular with developers. This move is another sign that Microsoft is investing in open source technologies and follows its \$7.5 billion acquisition of GitHub the previous year.

These acquisition could give Microsoft Azure an edge over Amazon Web Services as it would help Microsoft with running open source workloads with more power and scale.



Albeit not considered a OSS forward company, a few years ago (2018) Amazon Web Services quietly acquired the PostgreSQL migration services company OpenSCG. While some PostgreSQL fans weren't happy about the move, the OpenSCG acquisition may be emblematic of a much larger move by AWS.



Google has a strong open source contribution culture (contrasted with the AWS approach to use / leverage OSS). Googlers for example, have contributed a huge amount of code back to the community and projects like TensorFlow and Kubernetes.

In late 2020, Google Cloud announced Database Migration Service (DMS), a new service for migrating customers' MySQL, PostgreSQL, and SQL Server relational databases to its hosted database service, called Cloud SQL. Meanwhile, MariaDB announced that it has picked off an Oracle database customer, which is now running the MariaDB database on Google Cloud.

VAST TECHNOLOGY LANDSCAPE - POISED TO LEVERAGE OSS



Business Intelligence and Analytics Market was valued at \$26B in 2019 growing at a CAGR of 9.7%

The DevOps market is expected to grow to \$10B by 2023, at a CAGR of 24.7%

The Global Security Solutions Market was valued at \$253B in 2018 and is projected to reach \$526B by 2026, growing at a CAGR of 9.9%

SaaS Applications

Reporting / Analytics

Search Engines

Browsers / Viewers

Dev Ops

Security

Data Mining

Document Management Systems

Scripting Frameworks

Integrated Development Environments (IDE)

Resource Managers

Orchestration & Coordination

Stream Processing

APP Servers

Operating Systems

Databases (RDBMS, Graph, File Oriented, etc.)

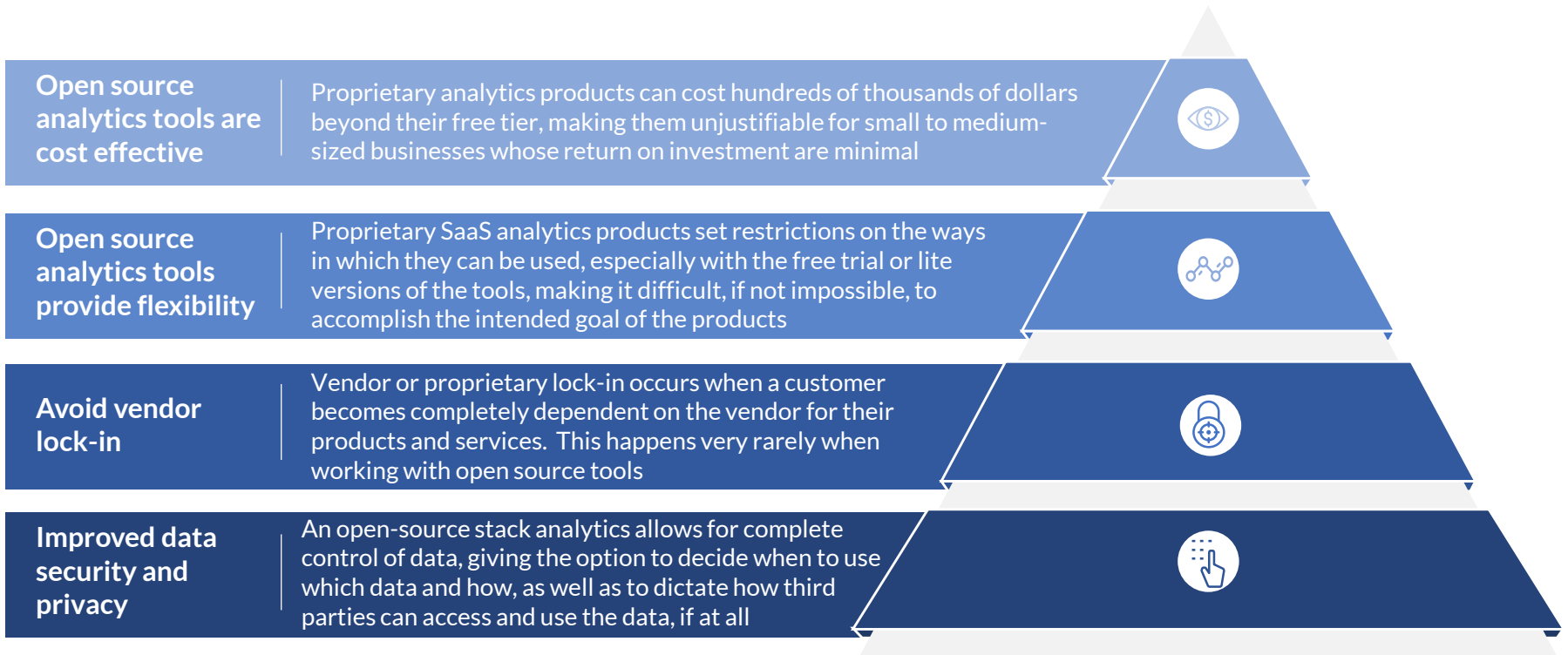
Data Integration

The global database software market was expected to decline to \$146B in 2020 at a CAGR of -1.7%. The decline is mainly due to economic slowdown across countries owing to the COVID-19 outbreak and the measures to contain it. The market is then expected to recover and grow at a CAGR of 12% from 2021 and reach \$201B in 2023

- Spotlight areas within this report for Open Source Software

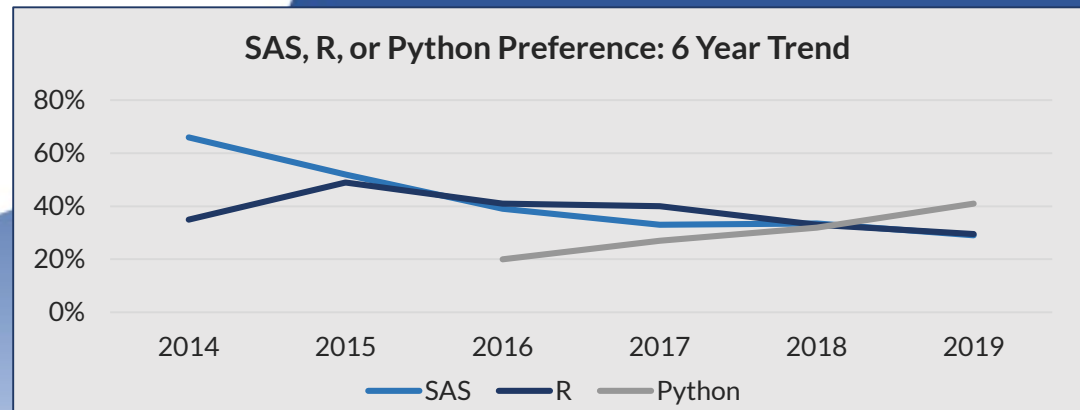
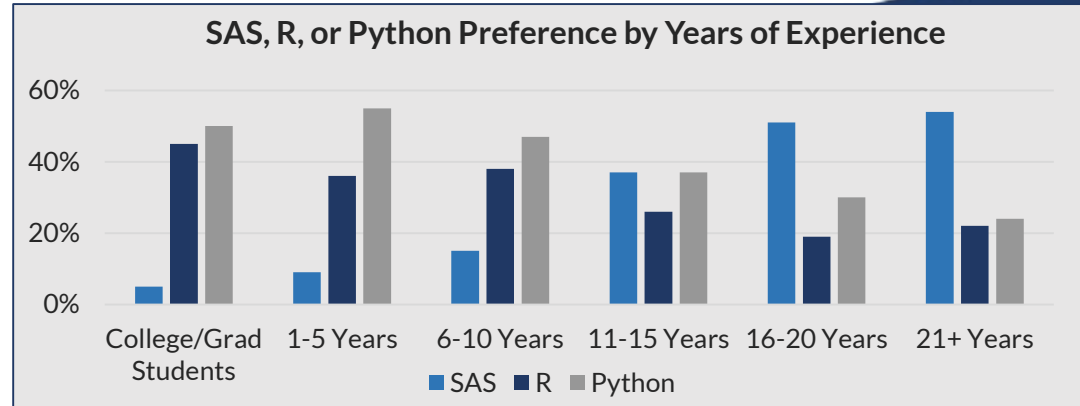
OPEN SOURCE SPOTLIGHT – REPORTING & ANALYTICS

Advantages of Open Source Analytics tools



OPEN SOURCE SPOTLIGHT – REPORTING & ANALYTICS

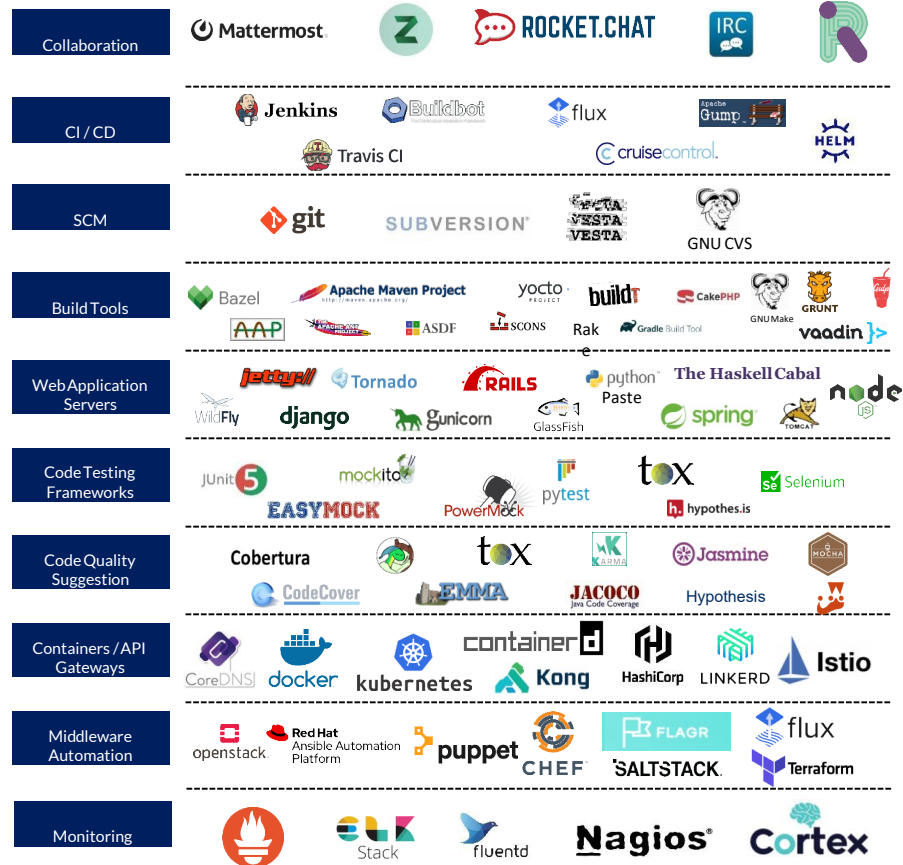
- Developers entering the work force have demonstrated a strong bias for open source reporting and analytic frameworks, with only 5% of college/grad students preferring SAS while 45% prefer R and 50% prefer Python, both open source software tools implemented under different open source licenses
- Trends over the past six years show a gradual shift in preference toward Python and away from SAS and R
- Preference for SAS, a proprietary software that was once the most highly preferred software tool by a significant amount, has been declining since 2014



OPEN SOURCE SPOTLIGHT – DEVOPS

- Enterprise DevOps users report that the modularity and componentization of open source software is particularly useful for DevOps, which often involves a wider array of tools and technologies. Open source software easily integrates with other software components, which allows it to serve as a catalyst for DevOps implementations
- Adoption of open-source software has had a substantial impact on how broad and successful enterprise DevOps deployments are, showing a clear and quantitative relationship between adoption of open-source software and DevOps success
 - Of companies with at least 60% of their DevOps portfolio as open source, 54% had reached the "fully deployed" DevOps state, with all of their development occurring via DevOps models
 - Only 30% of the companies that had 25% to 60% of open-source tools had reached the "fully deployed" DevOps state
 - A mere 20% of companies with low levels of open-source usage had managed to progress to the "fully deployed" DevOps state

Source: TechBacon



OPEN SOURCE SPOTLIGHT – SECURITY PLATFORMS



Security organizations have struggled to adequately protect themselves against cyber attacks. The only viable way to ensure security and keep up with the pace of business transformation is to rebase security on the principles of open source



Open security combines existing open knowledge with the application of OSS to help solve cyber security problems and improve privacy protection through collaboration using open source code



Security grounded in open source will facilitate interoperability between security tools; fill gaps in security products and create new capabilities; enhance the use of analytics and threat intelligence and share best practices with the community, enabling the industry to innovate more rapidly



Open Cybersecurity Alliance was launched in October 2019 to connect the fragmented cybersecurity landscape with common, open source code and practices to be shared, integrated, and reused by companies everywhere. Governed by OASIS, the OCA now includes 25+ member organizations and has introduced two major interoperability projects into the open-source realm



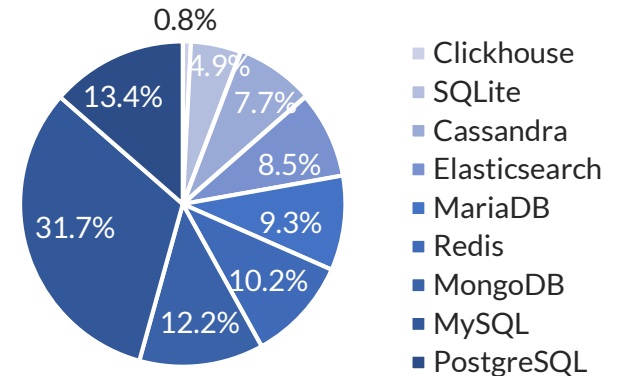
OPEN SOURCE SPOTLIGHT – DATABASE MARKET



- Over the years, relational databases have become better, stronger, faster, and easier to work with and are now the most widely accepted model for databases. A survey by Stack Overflow's developers found that 58.7% of organizations prefer SQL or relational databases over other databases
- According to IDC, by 2022 the relational databases will account for over 80% of the total operational database market
- Overall, the open source market is closing the gap with commercial databases, as open source software adoption continues to rise

- MySQL remains the top free and open source database, representing over 30% of open source database use, while PostgreSQL and MongoDB comprise second and third place at 13.4% and 12.2% respectively
- Oracle is the most popular commercial database used with open source at 66.7%, trailed by Microsoft SQL server and IBM DB2 at 22.2% and 11.1% respectively

2019 Most Popular Open Source Databases



Most Popular Commercial Databases Used With Open Source

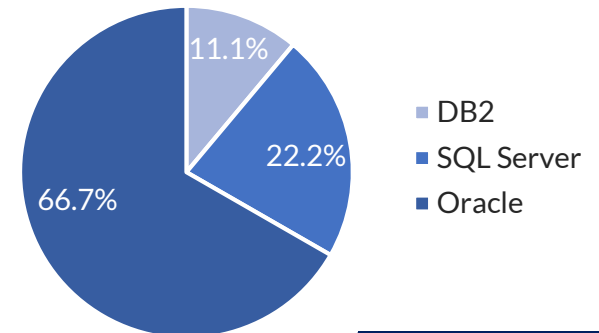














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PUBLICLY TRADED OPEN SOURCE SOFTWARE COMPANIES











Open Source Software Public Comparables							
(\$ in millions)	Enterprise Value /			Revenue	Revenue Growth	2020E Margins	
Company	Rev	Rule of 40 ^(a)	Enterprise Value	2019A	2020E / 2019A	EBITDA	Gross
 CLOUDERA	4.9x	29%	\$4,203	\$794	9%	20%	76%
 elasticsearch	20.6x	37%	11,438	385	41%	(5%)	72%
 talend	5.7x	7%	1,636	248	14%	(7%)	78%
 fastly	26.4x	45%	7,690	200	45%	(0%)	59%
 mongoDB	39.1x	29%	21,239	422	37%	(7%)	70%
 Progress	4.9x	NA	2,176	413	10%	NA	86%
 teradata	2.5x	14%	4,667	1,899	(4%)	19%	56%
 JFrog	26.4x	54%	3,979	105	43%	11%	81%
 RAPID7	10.5x	28%	4,330	327	25%	3%	70%
 tenable	8.8x	29%	3,880	355	23%	6%	82%
 rackspace	3.0x	39%	8,133	2,438	11%	28%	36%
 Qt The Qt Company	27.2x	71%	2,460	65	46%	25%	94%
Median	9.7x	29%	\$4,267	\$370	24%	6%	74%

Notes

(a) Rule of 40 = Revenue Growth Rate + EBITDA Margin Ratio

(b) Calculated as Equity Value plus total debt, minority interest (at book value unless otherwise noted) and preferred stock, less cash & equivalents

OPEN SOURCE SOFTWARE TOP INVESTORS (2017-2021)

Investor	Number of Investments	Representative Investments
	13	BrowserStack, Corelight, Couchbase, Databand, Demisto, ForgeRock, Hepto, Rasa, Segment, Snyk, Sonatype, Styre, Vercel
ANDREESSEN HOROWITZ	9	Anyscale, Databricks, Imply, Kong, Netlify, Planetscale, Preset, Rasa, Starburst Data
COATUE	7	Confluent, Databricks, Domino Data Lab, GitLab, PingCap, Snyk, Starburst Data
 Index Ventures	6	Cockroach Labs, Confluent, Elementl, Kong, Starburst Data, Strapi
	6	Anyscale, Databricks, Metabase, Nginx, Segment, Tigera
 Dell Technologies	6	Domino Data Lab, Jfrog, MinIO, Redis Labs, Tetrade, YugaByteDB
 GEODESIC CAPITAL	6	Confluent, Databricks, HashiCorp, Imply Jfrog Vercel
TIGERGLOBAL	6	Automatic, Cockroach labs, Databricks, GitLab, Kong, Snyk
 SAPPHIRE VENTURES	6	Cypress.io, Fastly, InfluxData, Jfrog, Kong, Segment
 INSIGHT PARTNERS	6	Automatic, Corelight, Docker, Jedox, Jfrog, Tigera
 salesforce ventures	6	Automatic, Databricks, Docker, InfluxData, Snyx, Starburst Data

OPEN SOURCE SOFTWARE TOP ACQUIRERS (2017-2021)











Acquirer	Number of Acquisitions	Notable Transaction	Representative Acquisitions
 Microsoft	5	Jun-18 – GitHub (\$7.5B)	GitHub, Deis, Jclarity, BlueTalon, Citus Data
 vmware	3	Dec-19 – Pivotal Software (\$2.9B)	Pivotal Software, SaltStack, Heptio
 AT&T	2	Jul-18 – AT&T Cybersecurity (\$1.6B)	AT&T Cybersecurity, AlienVault
 GitHub	2	Mar-20 – npm (ND)	npm, Semmler
 Xenon Partners	2	Aug-19 – Xplenty (ND)	Xplenty, Metricfire Limited
 VISTA EQUITY PARTNERS	2	Sep-19 – Acquia (\$1B)	Acquia, Sonatype,
 salesforce	2	Mar-19 – MuleSoft (\$6.6B)	Mulesoft, Attic Labs
 paloalto NETWORKS	2	Nov-19 – Demisto (\$474M)	Demisto, Aporeto
 NVIDIA	2	Mar-20 – SwiftStack (ND)	SwiftStack, Cumulus Networks
 MIRANTIS	2	Nov-19 – Docker (ND)	Docker, Kontena

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M&A TRANSACTIONS



Date	Target	Acquirer	Size (\$M)	Rev (\$M)	EV / Rev	Target Description
Feb-21	Inverse Inc.	Akamai Technologies Inc.	ND	ND	ND	Provides open source software consulting and integration services for businesses.
Jan-21	Pimcore	Happiest Minds (BOM: 543227)	8	ND	ND	Developer of enterprise management platform designed for managing any digital data and customer experiences for any channel and device.
Jan-21	MIA data ApS	Scanmarket A/S [Verdane Capital]	ND	ND	ND	Provides AI-enabled open source procurement analysis, reporting and categorization software to businesses.
Dec-20	Dataform [LocalGlobe]	Alphabet Inc.	ND	ND	ND	Provides open-source data analysis workflow software for data analysts and engineers at businesses.
Nov-20	Segment	Twilio (NYS: TWLO)	3,200	ND	ND	Developer of a customer data platform intended to collect and manage analytics data.
Oct-20	STXNext sp. z o.o.	Innova Capital Sp. z o.o.	ND	ND	ND	Provides Python and JavaScript-based software development and testing services to businesses globally.
Oct-20	Kasten Inc.	Veeam Software [Insight Partners]	150	ND	ND	Provides open-source data management software for Kubernetes-based cloud-native applications in containers.
Oct-20	Chef Software	Progress Software (NAS: PRGS)	220	ND	ND	Provider of continuous automation software intended to be used for automating IT infrastructure and applications.
Oct-20	Portshift Ltd.	Cisco Systems Inc.	80	2	40.0x	Provides Kubernetes-native application security software for businesses.
Sep-20	2ndQuadrant Ltd	EnterpriseDB Corporation [Great Hill Partners LP]	ND	ND	ND	Provides open-source, PostgreSQL-based relational database management software, SaaS, and related support, training, and consulting services for businesses globally.
Sep-20	SaltStack Inc.	VMware Inc. [NYSE:VMW] [EMC [Dell]]	51	ND	ND	Provides datacenter and IT infrastructure configuration, provisioning and infrastructure automation software and SaaS for businesses globally.
Sep-20	DeepCode AG	Snyk Ltd.	ND	ND	ND	Provides AI-enabled, real-time semantic code analysis SaaS and software for businesses.
Sep-20	eCreators PTY LTD	Learning Technologies Group plc	4	3	1.3x	Provides open-source Moodle-based e-learning management SaaS for businesses and schools.
Sep-20	Rundeck Inc.	PagerDuty Inc. [NYSE: PD]	100	ND	ND	Provides open-source DevOps automation SaaS for businesses.

M&A TRANSACTIONS (CONT'D)

Date	Target	Acquirer	Size (\$M)	Rev (\$M)	EV / Rev	Target Description
Sep-20	Abaxx Technologies Inc.	New Millennium Iron Corp.	38	ND	ND	Provides distributed-ledger, open-source financial software for commodity traders and finance professionals to communicate, trade, and transact faster and more securely.
Sep-20	Univa Corporation	Altair Engineering Inc. [NASDAQ:ALTR]	ND	ND	ND	Provides on-premise and cloud-based open source grid computing, cluster management, process automation and provisioning management software for systems management, data management and security purposes for businesses.
Sep-20	Alfresco Software Inc. [Thomas H. Lee Partners]	Hyland Software Inc. [Thoma Bravo]	ND	135	ND	Provides open-source enterprise content management software, SaaS, and related services for businesses and governments.
Aug-20	GreenBay Technologies Inc.	Informatica LLC [Permira/CPIIB]	ND	ND	ND	Provides open source AI and machine learning-based master data management software for businesses.
Aug-20	Kontena Inc. (Lens application)	Mirantis Inc.	ND	ND	ND	Kontena's Lens assets, which provides an open source Kubernetes-focused integrated development environment (IDE) application for businesses.
Aug-20	Drone.io	Harness Inc.	ND	ND	ND	Provides open source continuous integration and continuous delivery (CI/CD) source code testing and third party chat monitoring SaaS for DevOps teams.
Jul-20	VulnHub	Offensive Security	ND	ND	ND	Provides an open source, continually updated catalog of security training content and simulations for security and IT professionals.
Jul-20	The OpenNMS Group Inc.	NantHealth Inc.	ND	ND	ND	Provides open-source, AI-enabled network monitoring SaaS for carriers and enterprises.
Jul-20	Cognitect Inc.	Nubank	ND	ND	ND	Provides open-source transactional database management software development services to businesses.
Jul-20	OpenIO SAS	OVHcloud	ND	ND	ND	Provides open source object storage SaaS for businesses in Europe and Japan.
Jul-20	Rancher Labs	SUSE [EQT AB]	600	25	24.0x	Provides open source Kubernetes management SaaS for DevOps teams and businesses.
Jun-20	Redash Ltd.	Databricks Inc.	ND	ND	ND	Provides open source dashboarding and data query editor SaaS for data scientists and analysts globally.
May-20	Jetstack Ltd.	Venafi Inc.	ND	ND	ND	Provides open-source machine identity protection software as well as related managed, training, and consulting services for businesses.
May-20	Keybase Inc.	Zoom Video Communications Inc.	43	ND	ND	Provides open source messaging and file-sharing encryption software for consumers and businesses.

M&A TRANSACTIONS (CONT'D)

Date	Target	Acquirer	Size (\$M)	Rev (\$M)	EV / Rev	Target Description
May-20	Cumulus Networks Inc.	NVIDIA Corp.	ND	ND	ND	Provides Linux-based networking operating systems (OS) for datacenters and enterprises.
Apr-20	Reaction Commerce Inc.	Mailchimp	ND	ND	ND	Provides open source e-commerce API SaaS for retailers.
Apr-20	Portis	ShapeShift Global Ltd.	ND	ND	ND	Provides blockchain-based, open-source application development tools for businesses and consumers to enable decentralized digital financial capabilities.
Mar-20	Instructure	Thoma Bravo	2,000	258	7.3x	Developer of a cloud-based learning management platform designed to make teaching and learning easier.
Mar-20	npm Inc.	GitHub Inc. [Microsoft Corp.]	ND	ND	ND	Provides the Node.js. package management software and a public registry website for JavaScript developers globally.
Mar-20	Blackboard Inc. [Providence Equity] (Open LMS platform)	Learning Technologies Group plc	32	ND	ND	The Open LMS platform of Blackboard Inc., which provides open-source Moodle e-learning management SaaS for the education sector as well as the broader private and public sectors globally.
Mar-20	SwiftStack Inc.	NVIDIA Corp.	ND	ND	ND	Provides OpenStack-based open source data management software, SaaS and software-defined object storage for businesses.
Mar-20	Azul Systems Inc.	Vitruvian Partners LLP	340	ND	ND	Provides subscription-based Java virtual machines (JVM) for enterprise applications and an open source development software for embedded systems, IoT and IIoT edge devices, gateways and dedicated applications.
Feb-20	Scytale Incorporated	Hewlett Packard Enterprise Co.	ND	ND	ND	Provides cloud-based, open-source security management SaaS for businesses.
Jan-20	Pareto Network Ltd.	STS Capital Partners	ND	ND	ND	Operates a peer-to-peer, blockchain-enabled, open-source online financial analysis and reference content exchange.
Jan-20	SpecFlow [TechTalk Software AG]	Tricentis GmbH [Insight Venture Partners]	ND	ND	ND	Provides behavior-drive development (BDD) agile software testing and collaboration software for businesses globally.
Dec-19	Pivotal Software	VMware (NYS: VMW)	2,900	746	2.8x	Provider of platform, tools and methodologies intended to help companies deliver better user experiences.
Dec-19	NowFloats Technologies Pvt. Ltd.	Reliance Industries Limited	20	ND	ND	Provides open-source online business management and digital enablement SaaS and related mobile applications primarily for small and medium enterprises (SMEs), with a focus on the Indian market.
Nov-19	Aporeto Inc.	Palo Alto Networks Inc.	150	ND	ND	Provides open sourced cloud workload security and micro-segmentation SaaS to businesses.

M&A TRANSACTIONS (CONT'D)

Date	Target	Acquirer	Size (\$M)	Rev (\$M)	EV / Rev	Target Description
Nov-19	Sonatype Inc.	Vista Equity Partners Management LLC	625	80	7.8x	Provides an open source software and application quality assurance integration platform-as-a-service (iPaaS) for use in agile software development projects for businesses.
Nov-19	Docker Inc. (enterprise technology assets)	Mirantis Inc.	ND	ND	ND	The enterprise technology assets of Docker, which provides an open-source hosted software development, deployment and application container Platform-as-a-Service (PaaS) to enable automating, building, running and quality assurance of distributed applications for developers and IT systems administrators.
Nov-19	CloudSploit LLC	Aqua	8	1	8.0x	Provides open source cloud and commercial infrastructure cloud configuration management SaaS for businesses globally.
Nov-19	Opengear Inc.	Digi International Inc.	140	ND	ND	Provides open source remote access, network monitoring and IT infrastructure management SaaS and console servers to businesses.
Oct-19	NodeSource	IH2	ND	ND	ND	Developer of Node.js based technologies designed to address the unique needs of running Node.js at scale.
Oct-19	Feature Labs Inc.	Alteryx Inc. [NYSE:AYX]	ND	ND	ND	Provides data science SaaS and open-source development tools and APIs for businesses.
Oct-19	Infura Inc.	ConsenSys	ND	ND	ND	Provides managed services, blockchain developer tools and APIs for businesses. Infrastructure-as-a-Service (IaaS) enables developers to connect their applications, via APIs, to the Ethereum network.
Oct-19	CollabNet VersionOne	TPG	ND	ND	ND	Developer of enterprise value stream management solutions.
Oct-19	Insomnia Inc.	Kong Inc.	ND	ND	ND	Provides free and subscription-based open source API testing software for businesses.
Oct-19	Meteor	Tiny Capital	ND	ND	ND	Provides web application development PaaS for businesses.
Sep-19	Acquia Inc.	Vista Equity Partners Management LLC	1,000	230	4.3x	Operates as an open-source digital experience agency that provides Drupal web content management-based SaaS and services for businesses.
Sep-19	Metricfire Limited	Xenon Partners	ND	ND	ND	Provides cloud computing and event monitoring, consumption, performance management and visualization SaaS for businesses.
Sep-19	Semmlie Ltd.	GitHub Inc. [Microsoft Corp.]	ND	ND	ND	Provides open source software engineering and variant analytics software for developers.
Sep-19	Arcadia Data Inc. (assets)	Cloudera Inc. [NYSE: CLDR]	ND	ND	ND	Certain technology assets of Arcadia Data, which provides machine learning-based big data, Hadoop and Kafka data visualization and reporting software and SaaS for businesses.

M&A TRANSACTIONS (CONT'D)

Date	Target	Acquirer	Size (\$M)	Rev (\$M)	EV / Rev	Target Description
Sep-19	Cohesion Web Technologies	Acquia Inc.	ND	ND	ND	Provides enterprise-grade, low-code Drupal website builder SaaS for businesses.
Sep-19	Omnition	Splunk Inc.	ND	ND	ND	Provides open-source application performance management (APM) SaaS for enterprises.
Sep-19	TOK.tv Inc.	Minerva Networks Inc.	ND	ND	ND	Provides blockchain-based, sports-oriented online social network SaaS for businesses globally.
Aug-19	littleBits Electronics	Sphero	ND	ND	ND	Provides educational toys and learning systems for schools and students.
Aug-19	Perched LLC	Elastic NV (NYSE: ESTC)	ND	ND	ND	Provides online security and event management (SIEM) and threat management training courses for Mac, Linux or Windows users as well as consulting and support services to businesses.
Aug-19	JClarity Ltd.	Microsoft Corporation	ND	ND	ND	Provides open-sourced, machine learning-based Java Virtual Machine (JVM) analytics and optimization software and SaaS for businesses.
Aug-19	Proteon Software	Dark Rhino Security Inc.	ND	ND	ND	Provides open source-based web and mobile development and hosted email services to businesses globally.
Aug-19	ZBS CRM	Automattic Inc.	ND	ND	ND	Provides plug-in development tool SaaS for entrepreneurs and small businesses.
Aug-19	Vitech Corporation	Zuken	ND	ND	ND	Provides systems engineering SaaS and integration services to businesses, government agencies, and universities.
Aug-19	Belatrix Software	Globant S.A.	ND	ND	ND	Provides agile software design, development, testing, and consulting services to businesses in Europe and the Americas.
Aug-19	MapR Technologies Inc. (business assets)	Hewlett Packard Enterprise Co.	ND	ND	ND	The technology, intellectual property, and domain expertise in artificial intelligence and machine learning (AI/ML) and analytics data management assets of MapR, which provides AI and analytics data management software for businesses globally.
Jul-19	BlueTalon Inc.	Microsoft Corporation	ND	ND	ND	Provides enterprise user authorization and user access control cybersecurity software for use in Hadoop and SQL databases and big data environments.
Jul-19	Smile SAS [Eurazeo]	Keensight Capital	ND	148	ND	Provides open-source software systems integration services for businesses in Europe.
Jun-19	EnterpriseDB [Peak Equity Partners]	Great Hill Partners LP	ND	ND	ND	Provides open source PostgreSQL-based database software, as well as related software development and consulting services for enterprises.

M&A TRANSACTIONS (CONT'D)

Date	Target	Acquirer	Size (\$M)	Rev (\$M)	EV / Rev	Target Description
Jun-19	Cucumber Ltd.	SmartBear Software Inc. [Francisco Partners]	ND	ND	ND	Provides open source software development training, collaboration and test automation software for businesses.
Jun-19	HT2 Labs	Learning Pool Limited [Carlyle Group / Cardinal Capital]	ND	ND	ND	Provides continuous education SaaS for businesses.
Jun-19	Riptide Autonomous Solutions	BAE Systems plc	ND	ND	ND	Provides unmanned underwater vehicles (UUV), open-source hardware and software systems and autonomous marine robots for the military and defense sector.
May-19	Quinscape GmbH	AUCTUS Capital Partners AG	ND	ND	ND	Provides open source software development services for companies worldwide.
May-19	Mautic Inc.	Acquia Inc.	ND	ND	ND	Provides open source marketing automation and related campaign management SaaS for businesses globally.
May-19	Nexenta Systems Inc.	DataDirect Networks	ND	ND	ND	Provides open source software-defined storage (SDS) software for multi-cloud-focused enterprises, and 5G and IoT-driven telcoms and service providers. Storage software is hardware agnostic.
May-19	PipelineDB	Confluent	ND	ND	ND	Developer of a data analytics platform intended to look after queries based on streaming data.
Apr-19	Realm Inc.	MongoDB Inc. [NASDAQ: MDB]	39	ND	ND	Provides an embedded, open source and on-device cross-platform database and data synchronization SaaS for mobile application developers.
Mar-19	Demisto	Palo Alto Networks (NYS: PANW)	474	ND	ND	Developer of automated incident response and security orchestration platform designed to offer integrated threat intelligence and security orchestration.
Mar-19	SUSE	Aradian, EQT (STO: EQT)	2,800	366	6.9x	Developer of software-defined infrastructure and application delivery services.
Mar-19	Outlyer	Bitrise Ltd.	ND	ND	ND	Provides open source enterprise IT service management (ITSM), performance monitoring and analytics SaaS for cloud, container, hybrid or on-premise AWS, Rackspace, Google and Azure-based software developers.
Mar-19	NGINX Inc.	F5 Networks Inc.	670	26	25.8x	Provides open source application delivery SaaS and services for developers and network operation teams globally.
Feb-19	Manuscripts.app Ltd.	Atypen Systems Inc.	ND	ND	ND	Provides a free HTML-first and open source authoring and collaboration web application for Mac users that enables writers to write, cite, collaborate, host data and publish their work online.
Feb-19	DataTiger	Apple Inc.	ND	ND	ND	Provides open-source marketing software development tools to businesses that provide features for data importation, API software development and customer marketing optimization.

M&A TRANSACTIONS (CONT'D)

Date	Target	Acquirer	Size (\$M)	Rev (\$M)	EV / Rev	Target Description
Jan-19	Citus Data Inc.	Microsoft Corporation	ND	ND	ND	Provides an open source relational operational database software extension for PostgreSQL users.
Jan-19	Travis CI GmbH	Idera Inc. [HGGC LLC]	ND	ND	ND	Provides an open-source hosted, distributed continuous integration service used to build and test software hosted through GitHub.
Jan-19	SensioLabs SAS	Smile SAS [Eurazeo]	ND	ND	ND	Provides PHP framework SaaS and services for web developers globally.
Jan-19	Ververica	Alibaba Group (HKG: 09988)	103	ND	ND	Developer of a data stream processing platform intended to provide easy stream processing.
Dec-18	Xplenty Ltd.	Xenon Ventures	ND	ND	ND	Provides big data processing SaaS for businesses.
Nov-18	Tempo [Origo Partners]	Diversis Capital LLC	35	20	3.1x	Provides Jira-based project and portfolio management, payroll, workforce management and training, finance and invoice management software and SaaS for businesses.
Nov-18	Berico Technologies LLC	Novetta Solutions LLC [Carlyle Group]	ND	ND	ND	Provides cloud and open source-centric systems and network integration and data analysis services for governmental intelligence agencies.
Nov-18	Heptio Inc.	VMware Inc. [NYSE:VMW] [EMC] [Dell]	550	4	137.5x	Provides Kubernetes container orchestration software and services for businesses. Features include container performance testing, analysis, and recovery. Also provides related consulting and training services.
Oct-18	Atlassian Pty Ltd. [NASDAQ: TEAM] (Jitsi assets)	8x8 Inc.	ND	ND	ND	The Jitsi asset of Atlassian, which provides open source video communications software for businesses. Transaction also includes related Jitsi employees.
Oct-18	Red Hat Inc. [IBM]	International Business Machines Corp.	33,434	3,156	10.8x	Provides open-source Linux OS, middleware, desktop and server virtualization and systems management SaaS, software, as well as hybrid cloud management PaaS, for businesses globally. Also provides open source-based software-defined storage.
Oct-18	Versive	eSentire Inc. [Warburg Pincus]	8	1	8.0x	Provides open source predictive analytics and network security managed services to businesses.
Oct-18	Dunbar Security Solutions Inc. (Cybersecurity division)	ControlScan Inc.	ND	ND	ND	The cybersecurity division of Dunbar Security Solutions which provides ESIM software.
Oct-18	Hortonworks Inc. [NASDAQ:HDP]	Cloudera Inc. [NYSE: CLDR]	2,080	310	6.6x	Provides open-source Apache Hadoop data processing and data management software and support software, as well as training and consulting services, for businesses.
Sep-18	StackPointCloud Inc.	NetApp Inc.	ND	ND	ND	Provides Kubernetes DevOps open-source container orchestration PaaS to enable automated deployment, scaling and management of containerized applications.

M&A TRANSACTIONS (CONT'D)

Date	Target	Acquirer	Size (\$M)	Rev (\$M)	EV / Rev	Target Description
Sep-18	Digium	Sangoma Technologies (TSX: STC)	ND	ND	ND	Developer of an unified communications platform intended to transform the way businesses acquire and operate their communications systems through the application of open source software.
Aug-18	AT&T Cybersecurity	AT&T (NYS: T)	1,600	ND	ND	Developer of a digital security management and crowdsourced threat intelligence platform designed to simplify security in the cloud and on-premises.
Aug-18	SugarCRM	Accel-KKR	ND	ND	ND	Provider of an open source customer relationship management platform intended to deliver an indispensable tool for every individual who engages with customers.
Aug-18	Treasure Data	ARM	600	ND	ND	Developer of a cloud-based data analytics platform created to simplify data management.
Aug-18	Inocybe Technologies Inc.	Kontron S&T AG [S&T AG]	3	ND	ND	Provides open source networking management SaaS for businesses globally. Software enables users to manage software-defined networks (SDN) solutions based on open networking software including OpenDaylight, OpenSwitch, PND and ONAP.
Jul-18	Action	HCL Technologies (NSE: HCLTECH), Sumeru Equity Partners	330	ND	ND	Provider of hybrid data management, cloud integration and analytics services.
Jul-18	AlienVault Inc.	AT&T Inc.	600	125	4.8x	Provides open-source security information event management (SIEM) and unified security management (USM) SaaS for businesses.
Jun-18	Penguin Computing	SMART Global Holdings Inc.	60	167	0.4x	Provides high-performance Linux-based computer systems, racks, switches and storage appliances for businesses.
Jun-18	GitHub Inc.	Microsoft Corporation	7,500	375	20.0x	Provides software project management and team collaboration SaaS for businesses.
May-18	Magento Commerce [Permira]	Adobe Inc.	1,680	150	11.2x	Provides commercial and open source e-commerce software for online merchants.
May-18	Sipwise	Alcatel-Lucent	ND	ND	ND	Developer of open source based software designed to deliver core telecom switching infrastructure to replace existing legacy infrastructure.
May-18	Cask Data	Alphabet Inc.	ND	ND	ND	Provides open source data integration SaaS, or Cask Data Application Platform (CDAP), for businesses.
Apr-18	SourceClear Inc.	CA Technologies	ND	ND	ND	Provides open-source software composition analysis (SCA) SaaS for software development teams.
Mar-18	MuleSoft Inc. [NYSE: MULE]	Salesforce	6,579	296	21.9x	Provides open source application and data integration platform as a service (PaaS) for the financial, government, healthcare, higher education, insurance, media and telecom, and retail industries.

M&A TRANSACTIONS (CONT'D)

Date	Target	Acquirer	Size (\$M)	Rev (\$M)	EV / Rev	Target Description
Feb-18	CREATIONLINE Inc.	DENSO Corp.	ND	ND	ND	Provides big data and open source software development and systems integration services to businesses.
Feb-18	Alfresco Software Inc.	Thomas H. Lee Partners L.P.	250	100	2.5x	Provides open-source enterprise content management software and SaaS for businesses available in the cloud, hybrid cloud and provides an open source community edition for development.
Jan-18	Gemnasium	GitLab Inc.	ND	ND	ND	Provides open source software (OSS) vulnerability management and monitoring SaaS to software developers.
Jan-18	CoreOS	Red Hat	250	ND	ND	Provider of an open source software system designed to improve the security and reliability of the internet.
Jan-18	Attic Labs Inc.	Salesforce	ND	ND	ND	Develops decentralized database software, an open-source relational database which enables the ability to store, move, and collaborate on large-scale structured data.
Jan-18	Mapzen (talent assets)	Mapbox Inc.	ND	ND	ND	The talent asset of Mapzen, which provides open source mapping SaaS to businesses that are accessible on desktop or mobile devices.
Dec-17	ThoughtWorks	Altamir (PAR: LTA), Apax Partners	805	ND	ND	Provider of software development and digital transformation consulting services intended to help businesses solve complex technology problems.
Dec-17	COBOL-IT	Micro Focus International plc	13	ND	ND	Provides open source, COBOL application migration, modernization and compiling software for businesses globally.
Dec-17	Lenses	DataMountaineer	ND	ND	ND	Developer of a data platform management designed to simplify building, deploying and securing data flows.
Dec-17	Fox Technologies [Parallax Capital]	HelpSystems Inc. [H.I.G. Capital]	ND	ND	ND	Provides access policy compliance, authentication and password management SaaS for corporate IT network administrators.
Dec-17	Atollic AB	STMicroelectronics N.V.	7	ND	ND	Provides open source, ARM-based integrated development environment (IDE) software for microcontrollers.
Nov-17	ZeroTurnaround	Rogue Wave Software Inc. [Audax Group]	ND	ND	ND	Provides Java-based source code change, refresh, deployment, testing and syncing development tools and APMs for enterprises and businesses globally.
Nov-17	ATS Advanced Telematic Systems	HERE Global B.V. [AUDI AG/ BMW AG/ Daimler AG]	ND	ND	ND	Provides open source over-the-air (OTA) electronic control unit (ECU) updating and security SaaS for the automotive industry.
Nov-17	Restlet Inc.	Talend Inc.	10	2	5.1x	Provides RESTful open source API lifecycle-management platform as a service (PaaS) that enables Java-based Web application development for both server and client for businesses and developers.

M&A TRANSACTIONS (CONT'D)

Date	Target	Acquirer	Size (\$M)	Rev (\$M)	EV / Rev	Target Description
Nov-17	Black Duck Software Inc.	Synopsys Inc.	565	72	7.6x	Provides software that can manage an enterprise's use, risk and compliance issues around using open source software.
Nov-17	Sench	Barings BDC, HGGC, Idera, TA Associates Management	ND	ND	ND	Provider of a web application development platform designed to test and develop data-intensive web applications.
Oct-17	Smoothwall	Tenzing Private Equity	ND	16	ND	Developer of web filtering technologies and applications.
Sep-17	OrientDB Ltd.	CallidusCloud	9	ND	ND	Provides non-relational (NoSQL) database software for the storage of graph, document, key-value, geo-spatial, object-oriented and reactive models.
Aug-17	Basho	Bet365	ND	ND	ND	Developer of data store enterprise software.
Aug-17	DNN	ESW Capital	15	ND	ND	Developer of a web content management platform designed to build websites and web applications.
Aug-17	Brocade Communications (SDN controller assets)	Lumina Networks Inc.	ND	ND	ND	Broadcom's SDN controller assets, which provides OpenDaylight-based open source software-defined networking (SDN) SaaS for use in managing and monitoring enterprise networks.
Aug-17	Curoverse Inc.	Veritas Genetics	ND	ND	ND	Provides open source, AI-based biomedical data analysis software and SaaS for the medical sector.
Jul-17	StackIQ Inc.	Teradata Corporation [NYSE: TDC]	ND	ND	ND	Provides bare metal provisioning and infrastructure management SaaS for businesses.
Jun-17	Vor Security	Sonatype Inc.	ND	ND	ND	Provides an online index of open source software dependencies, vulnerabilities and best practices.
Jun-17	Ubix	Samson	ND	ND	ND	Developer of Internet-of-Things and automation platform.
May-17	Infobright (IAQ technology and IP assets)	Security On-Demand	ND	ND	ND	The Infobright Approximate Query (IAQ) technology and IP assets of Infobright, which provides an open source analytic database for machine-generated data and actionable insight via high fidelity approximations.
Apr-17	Deis Inc. [Engine Yard]	Microsoft Corporation	ND	ND	ND	Provides open-source Docker application deployment platform as a service (PaaS) for businesses globally.
Mar-17	Cumulocity GmbH	Software AG	53	ND	ND	Provides multi-carrier enabled, Web-based M2M wireless device management SaaS, enabling remote management and control, real-time analytics and predictive maintenance, online services for consumer products, and tailored device and application management.

M&A TRANSACTIONS (CONT'D)

Date	Target	Acquirer	Size (\$M)	Rev (\$M)	EV / Rev	Target Description
Mar-17	Gitter	GitLab Inc.	ND	ND	ND	Provides open-source instant messaging and chat room SaaS for software developers and users of GitHub.
Mar-17	Robomongo [Paralect]	3T Software Labs GmbH [Redgate Software]	ND	ND	ND	Provides MongoDB, NoSQL, non-relational database software for use by database administrators and developers.
Feb-17	Scilab Enterprises SAS	ESI Group S.A.	1	ND	ND	Provides open source simulation and modeling software for use in scientific and educational organizations.
Jan-17	Devlab Oy (Pupesoft ERP business)	Sprintit Oy Ltd.	ND	ND	ND	The Pupesoft ERP business of Devlab Oy, which provides open source ERP software to businesses primarily in Finland.
			Median:	\$150	7.6x	
			Average:	\$1,428	15.5x	

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PRIVATE PLACEMENT TRANSACTIONS

Date	Target	Round	Size (\$M)	Lead Investor(s)	Target Description
Feb-21	Automattic	Later Stage VC	275	ND	Developer of open-source content management systems built to democratize publishing and commerce.
Feb-21	Databricks	Series G	1,000	Franklin Templeton Investments	Developer of a unified data analytics platform designed to make big analytics data simple.
Jan-21	ThoughtWorks	PE Growth/Expansion	720	ND	Provider of software development and digital transformation consulting services intended to help businesses solve complex technology problems.
Jan-21	Snowplow Analytics	Series A2	12	Atlantic Bridge Capital	Developer of a behavioral data management platform designed to serve data teams.
Jan-21	Jedox	Later Stage VC	125	Insight Partners	Developer of a client-server software designed to create business intelligence and performance management services for systematic data analysis.
Jan-21	Cockroach Labs	Series E	160	Altimeter Capital Management	Developer of an open-source database platform designed to build global, scalable cloud services that can survive disasters.
Jan-21	Starburst Data	Series C	100	Andreessen Horowitz	Developer of an analytics platform designed to unlock the value of data by making it fast and easy to access anywhere.
Jan-21	Chronosphere	Series B	43	Greylock Partners, Lee Fixel, Lux Capital Management	Developer of a scalable cloud-native monitoring tool designed to eliminate the cognitive load of managing monitoring infrastructure and tracking data locality.
Dec-20	Kong	Series D	100	Tiger Global Management	Operator of an API platform designed to manage, monitor and scale application programming interface and micro-services.
Dec-20	Starburst Data	Series C	117	ND	Developer of an analytics platform designed to unlock the value of data by making it fast and easy to access anywhere.
Dec-20	Vercel	Series B	40	GV	Developer of a cloud-based workflow platform intended to optimize the entire development and deployment experience for frontend teams.
Dec-20	Databand	Series A	15	Accel	Developer of an observability platform intended to provide end-to-end monitoring of pipeline metadata.
Nov-20	Cypress.io	Series B	40	OpenView Venture Partners	Provider of a front-end automated application and service intended for testing anything that runs in a browser.
Nov-20	Logz.io	Series E	23	Pitango Venture Capital	Developer of an open-source log analytics platform designed to assist companies of all sizes to derive value from machine data.

PRIVATE PLACEMENT TRANSACTIONS (CONT'D)

Date	Target	Round	Size (\$M)	Lead Investor(s)	Target Description
Nov-20	Sighup	PE Growth/Expansion	17	White Bridge Investments	Developer and supplier of open source software focused on cloud-native infrastructures.
Nov-20	Arrikto	Series A	10	Unusual Ventures	Developer of a storage intelligence platform designed to rapidly turn data into actionable insights.
Nov-20	PingCap	Series D	270	5Y Capital, Access Technology Ventures, Anatole Investment, GGV Capital, Jeneration Capital	Developer of an open source distributed (HTAP) database designed to serve as a one-stop service for online transactions and analysis.
Nov-20	Puppet	Later Stage VC	ND	Ascolta Ventures	Developer of information technology automation software intended to help deliver and operate the modern software.
Oct-20	Weaveworks	Series C	37	ND	Developer of a SaaS-based software developing platform designed to empower developers and operations teams to optimize workflows.
Oct-20	Crate.io	Series A3	10	Fritsch	Developer of an open-source SQL database designed to facilitate real-time analytics of IoT and machine data.
Oct-20	Anyscale	Series B	40	New Enterprise Associates	Developer of an application development platform intended to simplify distributed computing.
Oct-20	SequoiaDB Software	Series D	29	CICC Capital	Developer of database software designed to offer distributed database access for enterprises.
Oct-20	Aave	Early Stage VC	30	ND	Developer of an online financial platform designed to earn interest on deposits and borrowings.
Sep-20	Neo4j	Series E2	30	One Peak Partners	Developer of an open-source graph database designed to help companies built intelligent applications.
Sep-20	Automattic	Series D	381	ND	Developer of open-source content management systems built to democratize publishing and commerce.
Sep-20	Snyk	Series D	200	Addition	Developer of security analysis tools designed to identify open-source vulnerabilities.
Sep-20	solo.io	Series B	23	Redpoint Ventures, True Ventures	Developer of an open-source and enterprise software intended to connect applications with service mesh across any infrastructure.
Sep-20	Hasura	Series B	25	Lightspeed Venture Partners	Provider of an application development platform designed to speed up and improve the process of building applications.

PRIVATE PLACEMENT TRANSACTIONS (CONT'D)

Date	Target	Round	Size (\$M)	Lead Investor(s)	Target Description
Aug-20	Netdata	Series A	31	Bain Capital Ventures, Bessemer Venture Partners	Provider of monitoring solutions intended to provide distributed systems performance and health.
Aug-20	Redis Labs	Series F	100	Bain Capital Ventures, TCV	Provider of an in-memory database platform for applications and services designed for transactional, analytics and hybrid deployments.
Jul-20	Grafana Labs	Series B	50	Lightspeed Venture Partners	Developer of a performance monitoring platform intended to collect, store and analyze data about the infrastructure.
Jul-20	MariaDB	Series C	52	Alibaba Group, SmartFin	Developer of an open-source database platform designed to support continuity and open collaboration.
Jun-20	Prisma	Series A	12	Amplify Partners	Developer of query builder tools for application development designed to help modern applications access and manipulate data through a unified data layer.
Jun-20	Rasa	Series B	26	Andreessen Horowitz	Developer of an open-source platform designed to develop standard contextual AI assistants and chatbots.
Jun-20	Open Raven	Series A	15	Kleiner Perkins	Developer of data security software designed to end data exposure by putting organizations back in control of their data.
Jun-20	Starburst Data	Series B	41	Coatue Management	Developer of an analytics platform designed to unlock the value of data by making it fast and easy to access anywhere.
May-20	Domino Data Lab	Series E	43	Highland Capital	Developer of a data science platform intended to help companies to develop and deploy ideas faster with collaborative, reusable, reproducible analysis.
May-20	Couchbase	Series G	105	GPI Capital	Developer of a cloud-based data platform designed to simplify mainframe and relational databases.
May-20	Strapi	Series A	12	Index Ventures	Operator of an API prototyping and creation platform intended to help developers build the powerful back end with minimal effort.
May-20	Astronomer	Early Stage VC	14	Venrock	Developer of a data engineering platform designed to collect and prepare statistics for business analytics.
May-20	Coder	Series B	30	GGV Capital	Developer of an enterprise platform designed to secure an organization's development environments.
May-20	Autieron	Early Stage VC	25	ND	Developer of a drone platform intended to make large-scale drone operations simple, safe, and fully integrated into workflows.

PRIVATE PLACEMENT TRANSACTIONS (CONT'D)

Date	Target	Round	Size (\$M)	Lead Investor(s)	Target Description
May-20	Cockroach Labs	Series D	87	Altimeter Capital Management, Bond Capital	Developer of an open-source database platform designed to build global, scalable cloud services that can survive disasters.
Apr-20	ForgeRock	Series E	93	Riverwood Capital	Developer of a digital identity management platform designed to facilitate secure organizational access controls.
Apr-20	Confluent	Series E	250	Coatue Management	Provider of an enterprise-ready event streaming platform intended to assist businesses to easily access data as real-time streams.
Apr-20	Mapbox	Series D	133	Premji Invest	Developer of a location data platform intended to be used for mobile and web applications.
Mar-20	YugaByteDB	Series B	30	8VC, Wipro Ventures	Developer of a distributed SQL database designed to help companies with global, internet-scale applications.
Mar-20	HashiCorp	Series E	175	Franklin Templeton Investments	Developer of cloud infrastructure automation platform designed to solve development, operations and security challenges in infrastructure.
Mar-20	Netlify	Series C	53	EQT Ventures	Developer of web development tool intended to design, deploy, and host modern websites.
Feb-20	Anyscale	Series A	21	Andreessen Horowitz	Developer of an application development platform intended to simplify distributed computing.
Jan-20	Anchore	Series A	21	SignalFire	Developer of a security and compliance platform designed to help organizations and developers implement secure container-based workflows.
Jan-20	Snyk	Series C	150	Stripes	Developer of security analysis tools designed to identify open-source vulnerabilities.
Jan-20	Traefik Labs	Series A	11	Balderton Capital	Developer of an open-source infrastructure software designed to offer powerful tools to ease the demanding infrastructure strain on information technology.
Jan-20	Seqera Labs	Early Stage VC	ND	Speedinvest	Provider of high-throughput computing solution intended to simplify complex data analysis pipelines in the cloud across pharma, genomics and biotech.
Dec-19	Odoo	Later Stage VC	90	Summit Partners	Developer of management platform intended to provide a complete suite of tools to accompany any business need.
Nov-19	Docker	Later Stage VC	35	ND	Docker is a developer of an open-source database platform.

PRIVATE PLACEMENT TRANSACTIONS (CONT'D)

Date	Target	Round	Size (\$M)	Lead Investor(s)	Target Description
Nov-19	Styra	Series A	14	Accel	Developer of a platform designed to eliminate operational, security, and compliance risk.
Nov-19	Gravitational	Series A	25	Kleiner Perkins	Developer of a cloud-based customer infrastructure software designed to simplify the management of cloud software.
Nov-19	Chronosphere	Series A	11	Greylock Partners	Developer of a scalable cloud-native monitoring tool designed to eliminate the cognitive load of managing monitoring infrastructure and tracking data locality.
Oct-19	Starburst Data	Series A	22	Index Ventures	Developer of an analytics platform designed to unlock the value of data by making it fast and easy to access anywhere.
Oct-19	JFrog (NAS: FROG)	Later Stage VC	ND	ND	Provider of an end-to-end, hybrid, universal DevOps Platform to achieve Continuous Software Release Management (CSRM).
Oct-19	Grafana Labs	Series A	24	Lightspeed Venture Partners	Developer of a performance monitoring platform intended to collect, store and analyze data about the infrastructure.
Oct-19	VoltDB	Series C	10	ND	Developer of an in-memory database platform intended to support applications at the intersection of 5G and video stream processing.
Oct-19	Databricks	Series F	400	Andreessen Horowitz	Developer of a unified data analytics platform designed to make big analytics data simple.
Oct-19	Imply	Series B	30	Andreessen Horowitz	Developer of a business analytics platform designed to provide sub-second query and operational database analysis.
Sep-19	Corelight	Series C	50	ND	Developer of a network visibility software platform designed to solve cybersecurity problems.
Sep-19	GitLab	Series E	268	Goldman Sachs Growth Equity, ICONIQ Capital	Developer of an open-source, code-collaboration platform designed to unify issues, code review, CI, and CD into a single UI.
Sep-19	Elementl	Series A	14	ND	Developer of data orchestrator software intended for data engineering.
Aug-19	Anaconda	Later Stage VC	ND	ND	Provider of web-based data analytics software and services designed to assist people to discover, analyze and collaborate data.
Aug-19	Snyk	Series B	70	Accel	Developer of security analysis tools designed to identify open-source vulnerabilities.

PRIVATE PLACEMENT TRANSACTIONS (CONT'D)

Date	Target	Round	Size (\$M)	Lead Investor(s)	Target Description
Aug-19	H2O.ai	Series D	73	Goldman Sachs Growth Equity, Ping An Insurance Company of China	Developer of an open-source machine learning automation platform designed to help in big data analysis.
Aug-19	LucidWorks	Series F	100	Francisco Partners	Developer of search and discovery applications designed to build smart search-based applications.
Aug-19	Cockroach Labs	Series C	55	Altimeter Capital Management, Tiger Global Management	Developer of an open-source database platform designed to build global, scalable cloud services that can survive disasters.
Jun-19	Bitrise	Series B	20	Partech	Operator of mobile continuous integration and delivery platform designed to craft powerful workflows for every development stage.
May-19	Logz.io	Series D	52	General Catalyst	Developer of an open-source log analytics platform designed to assist companies of all sizes to derive value from machine data.
May-19	Dgraph	Series A	12	Redpoint Ventures	Developer of an open-source and low-latency database designed to meet the visual data representation needs of small startups as well as large companies.
May-19	Planetscale	Series A	22	Andreessen Horowitz	Operator of a database management platform intended to improve performance and scale massively.
May-19	CloudBees	Series E	10	ND	Developer of a cloud-based platform designed to provide end-to-end automated software delivery system.
May-19	Vercel	Series A1	16	Accel, CRV	Developer of a cloud-based workflow platform intended to optimize the entire development and deployment experience for frontend teams.
May-19	Acquia	Later Stage VC	10	ND	Provider of a cloud-based content management platform designed to build, deliver and optimize digital experiences.
May-19	Coder	Series A	10	Redpoint Ventures	Developer of an enterprise platform designed to secure an organization's development environments.
Apr-19	Rasa	Series A	13	Accel	Developer of an open-source platform designed to develop standard contextual AI assistants and chatbots.
Apr-19	Segment	Series D	175	Accel, Meritech Capital Partners	Developer of a customer data platform intended to collect and manage analytics data.
Apr-19	GEO Protocol	Seed Round	ND	Coinfund	Developer of an open-source overlay protocol designed to empower the creation of a universal ecosystem for value transfer, including global payments and internet of things micropayments.

PRIVATE PLACEMENT TRANSACTIONS (CONT'D)

Date	Target	Round	Size (\$M)	Lead Investor(s)	Target Description
Mar-19	Kong	Series C	43	Index Ventures	Operator of an API platform designed to manage, monitor and scale application programming interface and micro-services.
Mar-19	Sauce Labs	Series F	50	Riverwood Capital	Developer of cloud-based continuous mobile and web-testing platform intended to help test software and applications in real-time.
Mar-19	ArangoDB	Series A	10	Bow Capital	Developer of a native multi-model database designed to available open-source for enterprise edition.
Mar-19	TerminusDB	Early Stage VC	ND	Enterprise Ireland	Provider of data analytics services intended to transform inconsistent data sets into structured and integrated data.
Mar-19	Tetrate	Series A	13	Dell Technologies Capital	Developer of a multi-cloud environment platform intended to offer enterprise-ready service mesh for any workload and any environment.
Mar-19	Netlify	Series B	30	Andreessen Horowitz, Kleiner Perkins	Developer of web development tool intended to design, deploy, and host modern websites.
Feb-19	Redis Labs	Series E	60	Francisco Partners	Provider of an in-memory database platform for applications and services designed for transactional, analytics and hybrid deployments.
Feb-19	Metabase	Later Stage VC	13	ND	Developer of an open source analytics and business intelligence platform designed to measure, analyze and share data to deal with the complexity.
Feb-19	Databricks	Series E	250	Andreessen Horowitz	Developer of a unified data analytics platform designed to make big analytics data simple.
Jan-19	InfluxData	Series D	60	Norwest Venture Partners	Provider of a data insights platform designed to manage volumes of time-stamped data produced by IoT devices, applications, networks, containers and computers.
Jan-19	Confluent	Series D	125	Sequoia Capital	Provider of an enterprise-ready event streaming platform intended to assist businesses to easily access data as real-time streams.
Jan-19	Preset	Series A	13	Andreessen Horowitz	Developer of an open visual data analytics platform designed to make data more productive.
Jan-19	Aave	Early Stage VC	ND	ND	Developer of an online financial platform designed to earn interest on deposits and borrowings.
Dec-18	Snyk	Series B	25	Accel	Developer of security analysis tools designed to identify open-source vulnerabilities.

PRIVATE PLACEMENT TRANSACTIONS (CONT'D)

Date	Target	Round	Size (\$M)	Lead Investor(s)	Target Description
Dec-18	Tigera	Series B	30	Insight Partners	Developer of an open core enterprise software designed to deliver services for secure application connectivity for the cloud-native world.
Dec-18	Camunda	Series A	28	Highland Europe	Developer of workflow automation and decision platform designed to offer detailed visibility into business operations across distributed systems.
Nov-18	Aras	Series D	70	Goldman Sachs Growth Equity	Developer of a product lifecycle management platform designed to improve the lifecycle processes of enterprises.
Nov-18	npm	Early Stage VC	ND	Alumni Ventures Group	Operator of a software registry platform intended to host and manage developer tools for JavaScript.
Nov-18	HashiCorp	Series D	100	IVP	Developer of cloud infrastructure automation platform designed to solve development, operations and security challenges in infrastructure.
Oct-18	Neo4j	Series E	80	Morgan Stanley Expansion Capital, One Peak Partners	Developer of an open-source graph database designed to help companies built intelligent applications.
Oct-18	Docker	Series E	92	ND	Docker is a developer of an open-source database platform.
Oct-18	Demisto	Series C	43	Greylock Partners	Developer of automated incident response and security orchestration platform designed to offer integrated threat intelligence and security orchestration.
Oct-18	JFrog (NAS: FROG)	Series D	165	Insight Partners	Provider of an end-to-end, hybrid, universal DevOps Platform to achieve Continuous Software Release Management (CSRM).
Sep-18	GitLab	Series D	100	ICONIQ Capital	Developer of an open-source, code-collaboration platform designed to unify issues, code review, CI, and CD into a single UI.
Sep-18	SequoiaDB Software	Series C	ND	Harvest Global Investments	Developer of database software designed to offer distributed database access for enterprises.
Sep-18	Corelight	Series B	25	General Catalyst	Developer of a network visibility software platform designed to solve cybersecurity problems.
Sep-18	PingCap	Series C	50	5Y Capital, Fosun International	Developer of an open source distributed (HTAP) database designed to serve as a one-stop service for online transactions and analysis.
Sep-18	Sonatype	Series E	80	TPG	Developer of open-source software designed to offer software supply chain automation and security products.

PRIVATE PLACEMENT TRANSACTIONS (CONT'D)

Date	Target	Round	Size (\$M)	Lead Investor(s)	Target Description
Sep-18	solo.io	Series A	11	Redpoint Ventures	Developer of an open-source and enterprise software intended to connect applications with service mesh across any infrastructure.
Sep-18	BigchainDB	Early Stage VC	ND	ND	Developer of a blockchain database designed to automate business processes.
Aug-18	MariaDB	Later Stage VC	ND	ND	Developer of an open-source database platform designed to support continuity and open collaboration.
Aug-18	Domino Data Lab	Series D	43	Coatue Management, Sequoia Capital	Developer of a data science platform intended to help companies to develop and deploy ideas faster with collaborative, reusable, reproducible analysis.
Aug-18	Automattic	Later Stage VC	ND	ND	Developer of open-source content management systems built to democratize publishing and commerce.
Jul-18	Komodo (Financial Software)	Early Stage VC	ND	NueValue	Developer of a blockchain platform intended to provide blockchain services for independent developers, startups, and enterprise businesses.
Jul-18	Fastly (NYS: FSLY)	Series F	40	DTCP	Fastly Inc operates edge cloud platform, designed to be programmable and support agile software development.
Jun-18	Puppet	Series F	42	Cisco Investments	Developer of information technology automation software intended to help deliver and operate the modern software.
Jun-18	CloudBees	Series E	62	Delta-v Capital	Developer of a cloud-based platform designed to provide end-to-end automated software delivery system.
Jun-18	Nginx	Series C	43	Goldman Sachs Merchant Banking Division	Developer of an open-sourced enterprise application platform designed to help in developing and delivering modern applications.
Jun-18	Crate.io	Series A	11	Deutsche Invest Capital Partners, Zetta Venture Partners	Developer of an open-source SQL database designed to facilitate real-time analytics of IoT and machine data.
Jun-18	YugaByteDB	Series A1	16	ND	Developer of a distributed SQL database designed to help companies with global, internet-scale applications.
May-18	Platform.sh	Series C	34	Partech	Developer of a container-based cloud hosting platform designed to simplify cloud infrastructures.
May-18	Styra	Seed Round	14	Pete Flint	Developer of a platform designed to eliminate operational, security, and compliance risk.

PRIVATE PLACEMENT TRANSACTIONS (CONT'D)

Date	Target	Round	Size (\$M)	Lead Investor(s)	Target Description
May-18	Foundries.io	Early Stage VC	ND	Wisemont Capital	Provider of cloud service intended to develop, CI/test, deploy and maintain secure, OTA updatable IoT and Edge Linux-based products.
Apr-18	LucidWorks	Series E	50	Top Tier Capital Partners	Developer of search and discovery applications designed to build smart search-based applications.
Apr-18	Jedox	Later Stage VC	25	eCAPITAL entrepreneurial Partners, Iris Capital	Developer of a client-server software designed to create business intelligence and performance management services for systematic data analysis.
Mar-18	Imply	Series A	13	Andreessen Horowitz	Developer of a business analytics platform designed to provide sub-second query and operational database analysis.
Feb-18	InfluxData	Series C	35	Sapphire Ventures	Provider of a data insights platform designed to manage volumes of time-stamped data produced by IoT devices, applications, networks, containers and computers.
Jan-18	BrowserStack	Series A	50	Accel	Developer of a software testing platform intended to power software tests every day across various global data centers.
Jan-18	Tigera	Series A1	10	Madrona Venture Group	Developer of an open core enterprise software designed to deliver services for secure application connectivity for the cloud-native world.
Jan-18	Amikto	Early Stage VC	ND	Fox Ventures	Developer of a storage intelligence platform designed to rapidly turn data into actionable insights.
Jan-18	DataStax	Later Stage VC	ND	Unusual Ventures	Provider of a distributed database management platform designed to power data management for cloud applications.
Dec-17	NodeSource	Series B	18	ND	Developer of Node.js based technologies designed to address the unique needs of running Node.js at scale.
Dec-17	StrongKey	Series A	10	Systema America	Developer of an enterprise key management infrastructure designed to ensure strong security of sensitive data in the public cloud.
Nov-17	Magnolia International	PE Growth/Expansion	ND	Elvaston Capital Management	Developer of a content management software designed to build best-of-breed digital experiences.
Nov-17	Logz.io	Early Stage VC	23	OpenView Venture Partners	Developer of an open-source log analytics platform designed to assist companies of all sizes to derive value from machine data.
Nov-17	H2O.ai	Series C	40	NVIDIA GPU Ventures, Wells Fargo Strategic Capital	Developer of an open-source machine learning automation platform designed to help in big data analysis.

PRIVATE PLACEMENT TRANSACTIONS (CONT'D)

Date	Target	Round	Size (\$M)	Lead Investor(s)	Target Description
Oct-17	HashiCorp	Series C	40	GGV Capital, Redpoint Ventures	Developer of cloud infrastructure automation platform designed to solve development, operations and security challenges in infrastructure.
Oct-17	Open-Xchange	Later Stage VC	25	eCAPITAL entrepreneurial Partners	Developer of an open-source SaaS platform for messaging and collaboration intended to keep the digital landscape open, secure and transparent for all.
Oct-17	Mapbox	Series C	164	SoftBank Investment Advisers	Developer of a location data platform intended to be used for mobile and web applications.
Oct-17	GitLab	Series C	20	GV	Developer of an open-source, code-collaboration platform designed to unify issues, code review, CI, and CD into a single UI.
Sep-17	MinIO	Series A	20	Dell Technologies Capital, General Catalyst, Nexus Venture Partners	Provider of an open-source distributed object storage software intended to address the demands of unstructured data growth.
Sep-17	Heptio	Series B	25	Madrone Venture Group	Provider of open source platform designed to make Kubernetes accessible to enterprises.
Sep-17	Aras	Series C	40	Silver Lake Management	Developer of a product lifecycle management platform designed to improve the lifecycle processes of enterprises.
Sep-17	ForgeRock	Series D	88	Accel	Developer of a digital identity management platform designed to facilitate secure organizational access controls.
Sep-17	Acquia	Later Stage VC	ND	SharesPost	Provider of a cloud-based content management platform designed to build, deliver and optimize digital experiences.
Aug-17	Databricks	Series D	140	Andreessen Horowitz	Developer of a unified data analytics platform designed to make big analytics data simple.
Aug-17	Redis Labs	Series D	44	Goldman Sachs Growth Equity	Provider of an in-memory database platform for applications and services designed for transactional, analytics and hybrid deployments.
Aug-17	Netlify	Series A	12	Andreessen Horowitz	Developer of web development tool intended to design, deploy, and host modern websites.
Jul-17	Segment	Series C	64	Y Combinator	Developer of a customer data platform intended to collect and manage analytics data.
Jul-17	Anaconda	Early Stage VC	14	ND	Provider of web-based data analytics software and services designed to assist people to discover, analyze and collaborate data.

Sources: Pitchbook, 451 Research

PRIVATE PLACEMENT TRANSACTIONS (CONT'D)

Date	Target	Round	Size (\$M)	Lead Investor(s)	Target Description
Jul-17	Tenable (NAS: TENB)	Later Stage VC	ND	ND	Manager and measurer of cyber exposure across a range of traditional IT assets, such as networking infrastructure, desktops, and on-premises servers.
Jun-17	PingCap	Series B	15	China Growth Capital	Developer of an open source distributed (HTAP) database designed to serve as a one-stop service for online transactions and analysis.
May-17	Fastly (NYS: FSLY)	Series E	50	Sorenson Capital	Fastly Inc operates edge cloud platform, designed to be programmable and support agile software development.
May-17	Cockroach Labs	Series B	27	Redpoint Ventures	Developer of an open-source database platform designed to build global, scalable cloud services that can survive disasters.
May-17	MariaDB	Later Stage VC	27	European Investment Bank	Developer of an open-source database platform designed to support continuity and open collaboration.
May-17	Docker	Later Stage VC	ND	ND	Docker is a developer of an open-source database platform.
Apr-17	Domino Data Lab	Series C	27	Coatue Management	Developer of a data science platform intended to help companies to develop and deploy ideas faster with collaborative, reusable, reproducible analysis.
Mar-17	Kong	Series B	18	Andreessen Horowitz	Operator of an API platform designed to manage, monitor and scale application programming interface and micro-services.
Mar-17	Confluent	Series C	50	Sequoia Capital	Provider of an enterprise-ready event streaming platform intended to assist businesses to easily access data as real-time streams.
Feb-17	Demisto	Series B	20	ClearSky	Developer of automated incident response and security orchestration platform designed to offer integrated threat intelligence and security orchestration.
Jan-17	Magento Commerce	PE Growth/Expansion	250	ND	Provider of open-source eCommerce and cloud commerce innovation services to merchants and brands across B2C and B2B industries.
Median:			\$35		
Average:			\$72		

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a) Open Source Software M&A Activity 2017 to 2021

b) Open Source Software Private Placement Activity 2017 to 2021

c) AGC Update

DISCLAIMER



Note: This document is intended to serve as an informative article only in order to further discussion, analysis, and independent verification. This document is based upon sources believed to be reliable, however, we do not guarantee the sources' accuracy. Unless otherwise indicated, AGC does not believe that the information contained herein is sufficient to serve as the basis of an investment decision. There can be no assurance that these statements, estimates, or forecasts will be attained and actual results may be materially different. This is not a solicitation of an offer of any kind. To learn more about the company/companies that is/are the subject of this commentary, contact one of persons named herein who can give you additional information.

AGC'S LEADING INFRASTRUCTURE TEAM



Boston

BEN HOWE
CEO, Co-Founder

Ben is the Co-Founder and CEO of AGC Partners. Ben has completed roughly 400 transactions in his 32 years as an Investment Banker. Prior to AGC, Ben served as Head of Technology Investment Banking for Montgomery Securities, and as Managing Director, Head of M&A and Executive Committee Member at SG Cowen Securities.



London

SEAN TUCKER
Partner

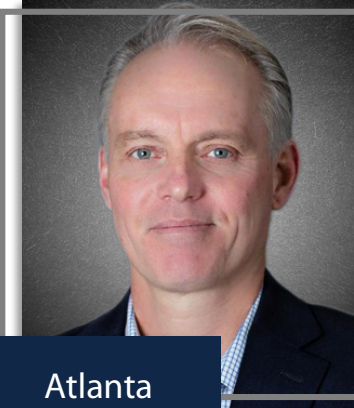
Sean has advised on transactions ranging from sell-side and buy-side M&A mandates to debt and equity financings. He leads AGC's franchise in Europe and focuses on Infrastructure Software technologies. Prior to joining AGC, Sean worked at EY and Deloitte where he led engagement teams in the Financial Services Office.



San Francisco

ROB BUXTON
Partner

Before joining AGC, Rob was Managing Director and Co-Head of Technology Investment Banking for CIBC World Markets from 1999-2008 and most recently Managing Director and Head of Technology, Media, and Telecom at Yorkville Advisors. Rob has more than 20 years of experience, having completed over 250 financing and M&A transactions.



Atlanta

BOB RENNER
Partner

Bob is a seasoned Entrepreneur, formerly CEO of Liaison Technologies, an Infrastructure SaaS company which he founded and guided to a successful \$310M exit. He directed all aspects of business operations, strategy and financing, including multiple capital raises and 11 successful buy-side transactions internationally and domestically.

GLOBAL LEADER IN TECH ADVISORY – 418 CLOSED DEALS



AGC ranked Top M&A Software Advisor of 2020



418 completed Tech M&A transactions



Over 40 current active engagements with 30 deals closed in '20



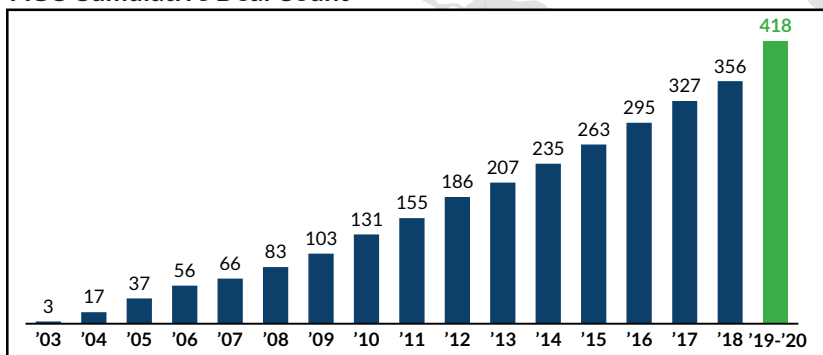
Deep sector research, knowledge and key relationships, with 20 partners across 10 cities in the US and Europe



Ben Howe sponsored a SPAC with the first PIPE involved back in 2008 – AGC has extensive SPAC knowledge

- Auctioning companies to SPACs, PE, and Strategics
- Advising on finding that Needle in the Hay Stack
- Coaching through a competitive auction
- Sharing our deep industry sector knowledge

AGC Cumulative Deal Count



MergerLinks 2020 Top Ranked Software Advisor*



Top

1. AGC Partners

2. Jefferies & Company
3. Raymond James
4. Robert W. Baird
5. William Blair



Leading

1. Canaccord Genuity
2. Evercore
3. Goldman Sachs
4. Harris Williams
5. Houlihan Lokey
6. Shea & Co



Established

1. Atlas Technology Group
2. Bank of America
3. Barclays
4. Credit Suisse
5. D.A. Davidson & Co
6. DC Advisory
7. Deutsche Bank
8. JP Morgan

* Based on MergerLinks' rankings of the top financial advisors for mid cap software deals in North America

Infrastructure Tech Rankings*

Firm	# Trans.
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1. AGC PARTNERS	140
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2. Jefferies	123
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3. Morgan Stanley	119
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4. Goldman Sachs	110
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5. CREDIT SUISSE	89
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6. DC advisory	79
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7. J.P.Morgan	79
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8. Bank of America	70
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9. EVERCORE	68
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*451 Research deal count based on Information and Data Management, infrastructure Management, Networking, Storage and Security sectors

TOP INFRASTRUCTURE ADVISOR: 140 TRANSACTIONS



Software tools used for managing and provisioning cloud computing, networking and application environments. This category includes application software development management and DevOp technologies

#1	Jefferies	73
#2	Morgan Stanley	36
#3	Goldman Sachs	36
#4	AGC	32
#5	CREDIT SUISSE	29



Information Security includes the combination of people, policies, processes and software technologies employed by an enterprise to protect its cyber assets. This category includes software enabled managed services

#1	AGC	73
#2	Jefferies	36
#3	Morgan Stanley	36
#4	DC advisory	31
#5	J.P.Morgan	29



Information Management, Data Integration and Storage software, including Analytics, Data Quality and Database Management Systems

#1	Jefferies	41
#2	Morgan Stanley	41
#3	CREDIT SUISSE	40
#4	Goldman Sachs	39
#5	AGC	29

TOP INFRASTRUCTURE ADVISOR - 140 DEALS



Selected Infrastructure Transactions

Liaison / OpenText – Leading cloud-based data platform that combines integration and data management into one end-to-end platform. AGC helped sell the business for \$310M, a substantial increase over the initial IOI

Boomi / Dell – Provider of on-demand business integration for SMBs. AGC leveraged its deep data management expertise and long history with the Dell family to drive a sale for 20x LTM revenue

Livedrive / J2 Global – Cloud-based storage and online backup service provider for SMBs. AGC drove a highly successful outcome for Livedrive's shareholders after a failed process with another bank

Cask / Google – Open source unified integration platform for big data providing developers with easy-to-use APIs with which to build large scale analytics frameworks. AGC helped Cask find a highly strategic home with Google Cloud in a rapid transaction process

Cloud Cruiser / Hewlett Packard Enterprise – Developer of cloud cost management software designed to manage hybrid cloud environments. AGC's process resulted in a dozen executed NDAs leading to detailed discussion of fit

Files.com / Riverwood Capital – A leading all-in-one cloud collaboration platform that integrates countless other cloud platforms and file transfer protocols. AGC conducted a rapid market test, helping the Company receive 8 LOIs and an 8x LTM Revenue final offer



Comments

- AGC is a leader in Infrastructure software transactions, advising clients on deals with leading strategic acquirers and private equity funds in the space, including sales OpenText, Dell, Google, HPE, Blackstone, Marlin and Vista
- Consistently ranked as the leading Infrastructure Software advisor, with many deals closed in Network, Application, Cloud Management, Information Management, and Data Integration & Storage. Across these three vectors within infrastructure, AGC has advised on 140 transactions to date, more than any other investment bank
- Deep body of industry research including whitepapers covering Infrastructure Software with pieces on Enterprise Storage, Multi-Cloud Management, Edge Computing, Systems Integration and other sectors

Market Insights



AGC'S INFRASTRUCTURE TRANSACTION EXPERTISE

NETWORK MANAGEMENT

 Sold to NETSCOUT	 Sold to ARBOR NETWORKS	 Sold assets to ORACLE	 Sold to DragonWave	 Sold to ribbon
 Sold to BROADCOM	 Sold assets to OPNET riverbed	 Sold to NETSCOUT	 Sold to GREENGLASS CAPITAL	 Sold to Infoblox

CLOUD INFRASTRUCTURE MANAGEMENT

 Sold to THOMABRAVO	 Sold to solarwinds	 Sold to Hewlett Packard Enterprise	 Sold to snow	 Sold to DELL	 Sold to EMC²	 Sold to NetApp
 Sold to riverbed	 Sold to CISCO	 Sold to GREENGLASS CAPITAL	 Sold to Micron	 Sold to Red Hat	 Sold to Intermec	 Sold to TCS

INFORMATION AND DATA MANAGEMENT

 Sold to Google	 Sold to amazon	 Sold to DELL	 Sold to Blackstone	 Sold to opentext
 Sold to J2 GLOBAL	 Sold to Western Digital	 Sold to CenturyLink	 Sold to BAIRD	 Sold to Tekelec





APP DEV / DEVOPS

 Sold to MARLIN EQUITY PARTNERS	 Sold to cloudbees
 Sold to ixia	 Sold to vmware

SECURITY

 Sold to ORACLE	 Sold to vmware
 Sold to Akamai	 Sold to NTT

TOP ACQUIRERS

 Sold to Microsoft	 Sold to servicenow
 Sold to ORACLE	 Sold to CISCO

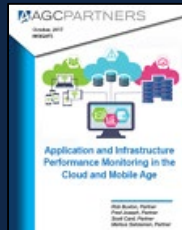
AGC RESEARCH



Multi-Cloud
Management



Edge Computing



Application & Infrastructure
Performance Monitoring



Machine Learning

- Over 100 white paper publications covering the latest technology and capital markets trends across all sub-sectors of Infrastructure Technology
- Authored by Banking Partners in collaboration with major sector participants – corporate buyers, private sellers, private equity investors and leading vendors
- Deeper and broader focus than mainstream research firms that only cover the top 10-20 vendors



Integration



Real-Time Analytics &
Internet of Things



DevOps Overview &
Market Trends



OpenStack: Ready for
Prime Time?

25+ INFRASTRUCTURE TECHNOLOGY RESEARCH REPORTS

OTHER INFRASTRUCTURE RESEARCH



Big Data



Storage



ECM



Low-Code



Integration



IoT



Critical
Infrastructure



Smart
Cities



Industrial
Analytics



BI &
Analytics



Cloud
Computing



Data
Management

THE BEST MIDDLE-MARKET GROWTH TECHNOLOGY CONFERENCES GLOBALLY



Premier Global Technology Conferences

- AGC Partners is one of the only investment banks in the world to hold middle-market industry conferences solely focused on driving relationships between strategic acquirers, PEs, and emerging private growth companies spanning all major tech sectors – In our last conference since COVID in Feb'20 we had 3,000 one-on-ones
- Offers insights from leaders in their respective industry, and direct engagement with the most active investors in the space
- Includes 500+ early and growth stage technology companies (revenues \$10-\$100M ARR) and 600+ private equity firms and strategic acquirers
- High caliber panels and 30-minute pre-arranged one-on-one meetings lead to hundreds of new relationships and drive the marketing efforts for pre-engaged clients

2020 San Francisco Conference Stats

1,585

Attendees

\$1.3T

In AUM Represented

3,000

1-On-1 meetings



	San Francisco	London	Boston	Total
Attendees	1,585	414	719	2,718
Private Companies	485	112	225	822
Investors	343	85	190	618
Strategics	233	26	50	309
Total 1-on-1 Meetings	3,000	915	2,250	6,165

Select Strategic Attendees



Select Private Equity Attendees

