

Cloudera: “Chase Interesting”

In my career, I've always chosen to work on what looked interesting. I've never said what my career development ought to be - I've always chosen interesting and things have worked out well. And this is just one of those instances. There was a chance to do something interesting that I had very little experience in, and it looked fun.

— Mike Olson, cofounder, former CEO, and current CSO of Cloudera

Mike and I sit side-by-side at the end of a long hallway... we are like an airline ticket counter. We want the company to see that we are a team together... I think this company would be nowhere where it is today if Mike had left.

— Tom Reilly, current CEO of Cloudera

Headquartered in Palo Alto, California with 26+ offices worldwide, Cloudera is a 1,600-employee software company that provides Apache Hadoop-based software and associated support, services, and training to business customers. In the 2015 fiscal year, Cloudera became the second company structured around open-source software to achieve an excess of \$100 million in annual revenues. Founded by four technology experts in their respective fields, Cloudera and its story since inception provide valuable insight into the spearheading of a new industry with an innovative business model.

Mike Olson

Born and raised in Kansas City, Missouri, Olson was first exposed to computers when his stepfather bought an Apple II personal computer — serial number 125 — built by Jobs and Wozniak in the garage where they fomented their brand. A “geek”, as Olson describes him, his stepfather worked at a research institute and was a member of the Kansas City computer club. While Olson initially used the computer to play games, he quickly discovered that it could be used to write programs. This developed as a passion of his throughout adolescence, in which he spent much of his high school years writing games in BASIC and learning 6502 Assembly. His interest in programming led him to attend computer camp in Columbia, Missouri. By the time he finished high school, he was quite confident that he wanted to pursue computer science in college.

Hoping to gain new experiences far from home, Olson went on to study computer science at the University of California, Berkeley in 1979. In order to garner some extra funds towards tuition,

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Olson picked up a part-time job working for the Computer Systems Research Group on campus. There, he worked alongside influential figures such as Bill Joy, then a graduate student, and his professor Bob Fabry, who were working on Berkeley Unix at the time. Olson says he would go into the office when no one was around and “just write code.”

Although his part-time gig was a good fit, Olson quickly encountered adversity in his studies despite his technical experience and natural aptitude. He found himself falling behind in courses and unable to complete problem sets. Prior to attending university, he had always been able to stand out without displaying copious efforts and had therefore never truly learned the discipline of working. At Berkeley, Olson realized he was no longer the smartest kid in the room and that he would really have to apply himself if he wanted to excel. This resulted in, as Olson says, “B’s, C’s, and a D or two” during his first couple of years at Berkeley.

A Not-So-Brief Detour

In the summer of 1982, Olson decided to go to Europe for some adventures with the hope of returning at the end of the summer as a more diligent student. His first stop was Amsterdam, where he picked up odd jobs in local bars and restaurants, even working as a line cook in a Mexican restaurant. Olson enjoyed himself so much that one summer abroad turned into four years in Europe and the Middle East. But in late 1985, Olson decided that he’d had enough fun and it was time to go back to the states.

Olson returned to his parents’ home in Kansas City and found a job automating billing procedures for a hospital health services company. It was also during this time that Olson met his girlfriend and future wife.

Shortly thereafter, Olson went to Berkeley to visit some of his friends from school. During this visit, he received a job offer to work for Britton Lee, a database company. After convincing his girlfriend to come with him, the couple moved to Berkeley and Olson began work under Paula Hawthorn, who pushed Olson to finish his degree from Berkeley. Surprisingly to him, Olson now knew how to apply himself, and the years off seemed to have done their job. He finished his undergraduate degree in computer science in 1991 and master’s degree in electrical engineering and computer science in 1993.

Paula’s former PhD advisor Mike Stonebraker had been working on the Postgres project at the time. Utilizing this connection, she procured Olson a job on Stonebraker’s research team. Stonebraker then recruited the rest of the research team to his company Illustra, which brought to market a commercialized version of the Postgres object-relational database management system. Olson was a year into his PhD program in database management systems under Stonebraker’s encouragement, but discovered his lack of interest in research and left his PhD program to join the Illustra team.

Illustra had issues selling their software as many of the sales people did not fully understand the functionality of the technology. Olson was older than most of the engineers at the company with more diverse experiences and a stronger ability to communicate with people. Recognizing this, the sales people began inviting him to join their sales calls and he would answer all of their technical questions, which led him to take up a role as a “sales engineer.”

As a sales engineer, Olson had the opportunity to hear about the interesting problems customers were facing and figure out how he could use the technology to solve them. Over time, Olson

became less responsible for developing software and more responsible for supporting sales processes, coordinating marketing strategy and writing documentation for the functionality of the software. In early 1996, Illustra was acquired by Informix and Olson was put in a managerial role on the business side. He enjoyed it for some time but did not like the large-company culture, so he left to join a smaller biotech company in Palo Alto, Molecular Application Group, as VP of Engineering. In addition to having personality differences with the CEO, Olson realized he did not understand the science well enough to excel in the role and left the company a short year later.

Olson then decided to take some time off to focus on his family. During this time, Margot Seltzer, Olson's old classmate with whom he worked on Berkeley DB, reached out to him about an open-source company she started called Sleepycat Software. Seltzer offered Olson a job in sales, and convinced Olson to become Sleepycat's first full-time employee in 1998. By 2003, the company had acquired fast growth, but still did not have a formal CEO — Olson volunteered to step into the role. In early 2006, Olson sold Sleepycat to Oracle and took on the role of VP of Embedded Technologies at Oracle for two more years.

Olson had been involved in enterprise software and the database industry for his entire career up until he left Oracle. He recalled:

“I was lucky in that we timed the sale of Sleepycat to Oracle in 2006 when it made sense for Sleepycat to get out. I had a two-year lockup. In 2008, I had been working in the database industry for twenty-four years, so it had been a long time, and I wanted to do something different. I had been competing against Larry Ellison (co-founder of Oracle) for all that time, until I finally showed that guy a company. It kinda sucked, he had a lot of money, and his product's really good. So I decided I was going to look at a different thing to work on.”

Launching Cloudera

In early 2008 as Olson was searching for something new to work on, he attended an event at Facebook where Jeff Hammerbacher, the data team lead, gave a talk on Hadoop, an open-source framework used for distributed processing of large datasets across computer clusters. Big data and cloud computing were novel concepts to Olson, who had a background in relational databases. However, it did not take long for him to identify this as his next endeavor.

Olson was familiar with building transaction processing systems for banks to satisfy their highest end demand. He recognized that Facebook was solving a dramatically different problem than what JPMorgan Chase was solving with relational databases. However, Facebook's problem involving handling data at scale was not unique — it would affect every industry being transformed by the internet, including the banks, hospitals, and insurance companies that ran on the relational database systems Olson built. Olson explained, “I was convinced that every large enterprise was going to have this data problem, and I'd done a lot of open-source software in my career. This open-source software was ideally designed.”

Olson and Hammerbacher were not the only ones thinking about an open-source big data solution. Amr Awadallah, the Vice President of Product Intelligence Engineering at Yahoo, and Christophe Bisciglia, a senior software engineer at Google who founded Google's Academic Cloud Computing Initiative, also had similar aspirations. Hammerbacher and Awadallah were trying to hire from the same talent pool, and Olson and Bisciglia had met at an industry event in China a year previously. In August 2008, Olson convinced Hammerbacher, Awadallah, and Bisciglia to

consolidate as a team to start Cloudera rather than individually founding their own companies and competing against each other in the same space.

Although the four co-founders knew each other from being in the same industry, none of them had directly worked together before. There were tensions in defining roles initially since all of the co-founders came from technical backgrounds, each with a different skillset and expertise. Olson describes the initial dynamics as “a mess,” stating that “everyone had the idea that they would be the one driving the technical direction of the business.” It was, however, unanimously decided that Olson would be CEO as he was the most senior member and had experience as a CEO and in other managerial positions prior to Cloudera’s inception. Olson posits that “four founders is just too many,” and that this lack of evident division in roles is the main reason that all four founders did not remain with Cloudera indefinitely.

Product Development and Early-Stage Financing

In September 2008, in their office in Burlingame, California, the co-founders agreed on the strategy to bring Cloudera, an enterprise provider of open-source Hadoop-based software, to market, and decided to raise some venture capital to catalyze growth. They put together a pitch deck (**Exhibit 1**) and met with potential investors, one of whom was particularly interested in Cloudera’s open-source Hadoop strategy: Ping Li of Accel Partners. Li was specifically interested in investing in enterprises built around Hadoop or similar technologies. Li explains, “Hadoop at that time was kind of gaining a lot of momentum in the community as the answer for some interesting problems, and the community was growing, it was becoming very popular.”

Cloudera raised \$5 million of Series A financing led by Accel on October 14th, 2008. In the weeks that followed, the stock market plummeted during the global financial crisis. For Cloudera, this was the perfect opportunity to grow and scale. With a fresh round of funding, Cloudera grabbed market share from companies that did not survive the economic downturn. Olson comments:

“If we had started Cloudera two years earlier, enterprises wouldn’t have been ready for this Hadoop software thing. If we started 2 years later, the big data was happening then, but it was obvious Hadoop was going to get commercialized by somebody. We were the only people talking about it in mid-2008. Our vision was clear, our strategic insight was right, but we just got super lucky on the timing. We hit the market exactly at the right time, and the global market crash was super helpful for us, because it gave us a free field and no competition for about a year and a half.”

Due to the fortunate timing, finding enterprise clients early on was not too difficult for Cloudera. Large companies were looking to shed costs, so they were willing to take a chance with Cloudera. With few competitors in sight, Cloudera was determined to become the leading big data management platform.

In addition to good timing, the founding team was another key to Cloudera’s initial success and a big reason why Accel made the investment. According to Li, the four co-founders were “the people that were living and breathing this problem, in some ways before the rest of the world really understood it. They had an intuition around it, Mike Olson who had a long history in the old world of databases, and you marry that with the newer approaches his co-founders grew up in, and so the team was just really unique in their understanding of the opportunity, and also they had a vision that was very bold.”

Cloudera's co-founders focused their early hiring strategy on recruiting and retaining top technical talent. Olson mentioned, "we kept our bar really high, we always wanted to be an engineering company. And the trick is, if everybody on your team is A+, then all the other A+ players want to go there." Hammerbacher sourced from Quora, finding the people who asked the hardest questions and gave the best answers. Doug Cutting, the founder of Hadoop, left Yahoo, a leading innovator of search intelligence at the time, to join Cloudera on September 1, 2009.

Because of their unique, pioneering model and extremely talented co-founders, Cloudera received good press coverage early on that helped generate a huge amount of interest. In early 2009, an article was published about Cloudera in the *New York Times*. With the new spark in interest from investors, Olson met Aneel Bhusri, a partner at Greylock, co-founder and CEO of Workday, and a member of Intel's board of directors. Greylock led Cloudera's \$6 million series B round on June 2, 2009, with continued participation from Accel. Olson notes, "that was the last time we ever raised money after spending the first dollar of the prior round."

Almost a year following the economic crisis, the market jump started again and Cloudera had not yet spent any of their Series B funding. On October 26, 2010, Cloudera raised a \$25 million Series C funding round led by Meritech Capital – not because they were running out of money, but to satisfy one of their big banking customers who claimed that they were vulnerable to financial crisis.

Bisciglia and Hammerbacher eventually left the company, but the culture and vision of early Cloudera prevailed. Li, who stayed close to the co-founders as the company grew, mentions:

"From the day one, all these founders had really big ambitions and really wanted to push harder to realize the company's potential to the fullest, and they were very open with each other, and also in many ways very tough on each other too in terms of pushing each other. I think they're permeated throughout the entire company from day one. I look at the top early hires they made and the hires they make now, there's always a "how do we do things better" mentality at Cloudera."

A Change in Leadership

By 2013, Cloudera had become quite a large company — with a 450-person staff and millions in revenue. Sales forecasting became very important as the company needed to develop a financial plan that pointed toward profitability.

At the time, Olson understood that tech companies benefit from a deeply technical CEO during the company's early stages but also recognized that Cloudera was approaching new grounds. Cloudera was entering a stage in which the accelerating growth of the company required a more operationally-focused CEO with a strong sales background. Olson had also begun encountering an increasing number of CEO responsibilities that he disliked and felt he wasn't suited for. He had a decision to make about the future of Cloudera's leadership, as well as his role and impact at the company.

Eventually, Olson held discussion with Cloudera's board of directors about bringing in a new CEO. Quietly, the board and Olson began their search. They met Tom Reilly, former CEO of ArcSight, a company that also had a founding technical CEO for whom Reilly had taken over. Olson sensed that the board wanted to bring in new leadership and that, had he not initiated the discussions, the board would have done so themselves six months later.

Tom Reilly

Reilly attended the University of California, Berkeley from 1980 to 1985 and graduated with a Bachelor of Science in mechanical engineering. During his undergraduate years, he took two semesters off to participate in a co-op program at IBM. After graduation, he returned to IBM for two years to work as an engineer. He described the job as “lonely” – sitting in a room with a drafting table designing robotics and conveyor systems. Coincidentally, IBM was pushing a program they called “Back to The Field” where, in an effort to rebalance their resources, they actively encouraged more people in engineering to shift to sales. Reilly decided to make a big leap and become a sales representative. On the transition, Reilly comments:

“That was a big change in my career because I went from being an introverted engineer to a sales person doing more extroverted things. I was fortunate to be assigned to a good early account, but the hardest thing was learning to be an extrovert. To this day I consider myself an introvert but a practiced extrovert.”

Cloudera would be the third time Reilly would be brought on as CEO to a company that had founding CEOs change roles. He first did so at Trigo Technologies, which was an early-stage company with three founders all in their twenties. The founding CEO of Trigo Technologies took on a new role as Reilly took on CEO responsibilities from 2001 to 2004. Similarly, Reilly joined ArcSight and took the company public in September 2007, and it was later acquired by Hewlett-Packard in 2010 in a “crazy high valuation that was a tremendous outcome for everybody involved,” as Reilly puts it.

Reilly talks about his track record of assuming CEO roles and how that has worked at Cloudera:

“It is often rare that a technical founder will lead a company through all stages. I would never be good at being a founder of an early stage company. I would just flounder. It takes a unique skill to just believe in something — to go through all that grunge work, to then go raise your first money and get your first customers. If I can sit here and say, “I can’t do that,” I can equally well look at Mike and say “You did that very well,” but you may not be setup to do something at a much later stage. So when Mike and the board agreed to recruit a CEO for the next stage of company, it wasn’t because anything was wrong for Cloudera. It was for the next stage. And I suspect Mike was seeing things he didn’t want to do or didn’t enjoy doing, which are things I enjoy doing, right? So it’s kind of that yin-yang.”

Tom, Meet Cloudera

After leading the integration of ArcSight into HP following the acquisition, Reilly retired at the age of 50. A year into retirement, he received a phone call from a prominent Cloudera board member. Reilly answered the phone while vacationing with his wife in Lake Tahoe and enjoying a glass of champagne. As soon as it was mentioned that a CEO position was open at Cloudera, he put the phone to his chest, turned to his wife, and said “Stacy, I’m going back to work.”

After “work-dating” Olson for three months and having conversations centered around Olson’s vision for the company and how the two would work together, Reilly accepted the position and joined as CEO of Cloudera in 2013, under the condition that Olson stay committed to maintaining a key role at the company for the foreseeable future.

Reilly says of his initial goals at Cloudera:

“I’ll give you a theory I have. You don’t need to come in and change everything to add value. The best thing is to add value in very small ways. Those little changes have big impacts, and I’m a big believer in that. You don’t have to change the strategy. You don’t have to replace the team.”

Reilly wanted to create a more customer-centric culture at Cloudera, focusing on current customers before future customers. He asks for frequent reports on current customers and what they can do to improve their experience before thinking about how they’re going to land their next customer. Aligning with this mission, Cloudera evaluates sales forecasts weekly in order to determine micro-adjustments that might improve outcomes.

New Dynamics

Reilly believes that companies belong to the founders – they imprint culture onto the company. Reilly says that “imprint means the culture and strategy – what I’ll do as CEO is just one of the jobs.” He leads Cloudera not with the philosophy that he will decide the direction the company goes, but rather the philosophy that his position as CEO can be distilled to the following: 1) ensuring that the company *has* a strategy, which he often leans towards the founders to really take ownership of, 2) clearly *communicating* that strategy to the customers and employees, and 3) knowing how to *measure progress* and executing on that plan.

Throughout his leadership, Reilly has made it a priority to develop a team that aligns by these three key points while ensuring that Olson and Awadallah are at the forefront: “I want them to be the brand and I’m happy to just be the CEO.”

Regarding the change in leadership, Olson comments, “Tom is deeply gifted. A gifted CEO gets A+ behavior out of his A team by understanding the weaknesses and playing to the strengths and making sure that friction is identified and conflicts resolved.”

Series F Investment

Throughout their lifetime, Cloudera had always been quite comfortable regarding capital. In early 2014, however, Cloudera was approached by Intel who was interested in having a hand in the Hadoop open-source project space. Reilly reflected:

“Sometimes, you are confronted with situations and you may respond too quickly. So it may seem like “okay, I’m gonna go raise this money from Intel and let’s go do that.” No. Intel wanted to play in this space and that was confronted to me, and so I think Intel was looking at a buy versus partner type approach. We wanted to really jump in and tell them why partnering with us was a way for them to achieve their strategic objectives.”

Olson and Reilly were all-in with the strategic offer Intel presented. Reilly had a strong understanding of how a business relationship with such an important client should be established as well as how the deal should be structured. Olson on the other hand, throughout his experience with big data management systems, knew the ins and outs of the technology at Intel. Reilly recalled: “What Intel does at the silicon chip level is very, very complex and how our software could be optimized for it is very, very complex, and Mike can run with that. And he did, and he spent time with their leadership and their engineers about how we can combine together, really optimize Intel architecture”. This strategic partnership was the key reason Olson and Reilly were confident going into the deal.

With Cloudera fully on-board and Intel intent on the deal, the investment went through. On March 31, 2014, an agreement was made which involved Intel investing \$740 million in exchange for 18% equity, thus equating to a total company valuation of \$4.1 billion. The deal caused ripples throughout Silicon Valley, with many considering it to be a shockingly high valuation especially considering the fact that just two months prior, through traditional investment routes, Cloudera was “only” valued at \$1.6 billion. Olson was unmoved, claiming that Cloudera has been influential contributing to the run-up of valuations of software industries especially in early stages. Reilly was also unsurprised. He mentioned:

The company didn’t change in the two-month period between Intel’s Series F and the investments made by the traditional investors. What changed was the type of investment that was being made. So the professional financial investors, were investing at a rate that they expected to get a return on, and they all did extremely well. They just gave us some money, and we gave them some shares.

Intel, on the other hand, did a strategic investment, and there was a lot of trading back and forth. Intel sits on our board and we commit to a collaborative roadmap where we have engineers working on optimizing their chip and they have engineers who work with our software engineers. We have to go to market relationships, and how we sell together and market together.

So it is a completely different investment thesis, and everyone got hung up on the valuation and not on the relationship and the partnership. So much like our financial investors were very happy, our strategic investors were also very happy, because they want to make sure that their architecture’s optimized for this big analytic move, and it is. We’ve delivered on that. It was just different investment theses.

Reilly did admit, however, that strategic investments like these are very rare occurrences and that Cloudera’s strong financial position did help them tremendously in being able to secure large investments and beneficial partnerships.

With the injected capital from Intel in place, Cloudera never had to raise capital through funding rounds again. Conditions were right for Cloudera to secure the position as the world’s leading open-source cloud computing company.

Acquisitions

Inspiration

At the time, Intel had about 94% market share in the space of data center processing chips. That market leadership gave Intel near-perfect visibility of what was driving the acquisition of new chips and servers in data centers. This clairvoyance, in conjunction with Cloudera’s cutting-edge software, allowed for greater profit margins in areas of technology that had previously been too expensive to pursue at scale. One such area is data encryption.

Encryption within the software industry had been traditionally costly. Unwilling to compromise the security of all data, Intel approached Cloudera about how their x86 chipset allowed for encryption in the hardware that would result in ten times the software performance. Olson and Reilly agreed to this proposition and promised to make that technology open-source so that every

company could take advantage of it. However, one issue remained: a key manager is required for this large-scale encryption plan.

Gazzang

Cloudera estimated that it would take six months to take the x86 technology into the open-source environment. In that time period, they went out in search for a key management encryption company. On June 2, 2014, they finalized the acquisition of Texas-based startup Gazzang. With this acquisition, Cloudera sent out a bold statement to their clients that they do not just believe in encrypting sensitive data, but *all* data. Their partnership with Intel would allow them to do so at reduced costs previously unheard of in the industry.

IPO

Cloudera Goes Public

The spring of 2017 sparked the revival of the IPO market as major tech companies like Snap and Blue Apron announced their decision to go public. Back at Cloudera, Olson and Reilly were discussing a potential IPO to be announced early in the summer. The motivation was straightforward: Olson and Reilly felt that shareholders and venture capitalists deserved a return on their investments. Reilly recalled:

“The number one reason that we had to go public was that I inherited an obligation to our early venture capitalists, our early investors, and our early employees. And we had employees that had been here eight years, who, especially the early ones, weren't paid at market and took this piece of paper called stock that was worth nothing back then with the promise that it could be worth something. And they worked really hard, so I came in and said I'd rather be running it – it's a lot easier to run a private company – but that's not my choice. It's, you know, we need to get this return.”

Olson and Reilly realized that taking Cloudera public would cause them to relinquish some control of the company, but it definitely had its advantages. An IPO would be a huge financing and brand marketing event as Olson and Reilly prepared to take Cloudera to the next stage. It would also instill a strong sense of transparency for Cloudera in the eyes of the market. Referencing the positives of being a public company, Reilly says:

“There's a lot of transparency. And if your financials are very strong, as ours are, that transparency is very powerful when you're selling to companies. Because when you're a private company, buyers of technology are always worried about ‘are you going to go out of business are you going to be acquired, and if you're gonna be acquired, who's gonna acquire you’. And the amount of times when we're a private company and the rumors are out there that Oracle's gonna buy us – once you go public that kind of all goes away.”

On April 28, 2017, with J.P Morgan, Morgan Stanley, and Allen & Company LLC hired as lead underwriters, Cloudera announced the pricing of its IPO offering of 15,000,000 shares at \$15/share, higher than the company's expectation of \$12-\$14/share when they filed for IPO in March. The IPO resulted in a \$225,000,000 raise in financing for Cloudera and Cloudera also saw a 20% jump in its share price by the end of the day, up to \$18.09/share.

Down Round

The IPO also placed Cloudera's public market valuation at \$1.9 billion, a far cry from the \$4.1 billion that Intel privately valued Cloudera at. Market analysts postulated that this may have been influenced by investors' bias and sentiments towards Hortonworks, a principal competitor in the Hadoop space, which had seen its share price slump by about 60% since its IPO in December 2014.

Furthermore, Cloudera was not a profitable business and this might have served as an indicator that led the public market to lower their valuation. Despite cutting losses from the previous fiscal year 2016, Cloudera was still considered by many to have a cash-burning business model. This, in addition to the fact that Hadoop was still in its very early stages of public market acceptance, could have contributed to Cloudera's reduced valuation.¹

Reilly, however, is unfazed by the public's opinion. He says: "All of our financial investors are very happy with their returns. We are very excited with our valuation, and we are very excited with the receptivity to the street against our performance."²

Future of Cloudera

Reflecting on the IPO, Olson admits that Cloudera had a tremendous unfair advantage in the amount of financial resources they possessed that allowed the company to tolerate losses that other companies simply could not. "Cloudera is such an odd business," recounted Olson. "We raised \$1 billion selling software. You'd expect to be building a plane manufacturing company with that kind of money, not selling software."

With the IPO a success and Cloudera now in the public space, it's time for Olson and Reilly to look ahead. Regarding the impact of the IPO on future outlook, Reilly says:

"Even before the proceeds from our IPO, we are a fully-funded company. We are fully funded through profitability. With the proceeds of the IPO, that gives us even greater flexibility to look long term, look at this big market, and make sure that we remain the market leader by making the right investments, having the right partnerships and looking long term."

And Reilly knows that his role as CEO was only going to get tougher from here on. Being the market leader in the cloud data management space, Cloudera has to withstand the constantly increasing pressures from legacy corporations such as HP, Oracle and Microsoft as they too start catching onto Hadoop and the use of open-source software. Reilly is aware that since Cloudera is now a public company, it will also face competition from other startups aiming to disrupt the open-source software market.

¹ Caitlin Huston, "Four things to know about the Cloudera IPO", marketwatch.com, April 28, 2017

² Anita Balakrishnan, "Cloudera shares close more than 20% higher on Day 1", cnbc.com, April 28, 2017

But Cloudera has a strategy in mind. Given that the fastest growing sector of Cloudera's business is the adoption of technology in the cloud, some of their biggest investments post-IPO were focused on the development of their business capabilities further in the cloud addressed specifically through partnerships with Amazon and Microsoft.

Olson also has personal plans of his own. Having been with the company from inception to current day, Olson has humble aspirations for his future in Cloudera: "My hopes would be that as time goes on, I get to be more involved in social causes within Cloudera that complement my day-to-day tasks."

Mike Olson and Tom Reilly continue to be the driving force behind Cloudera's success. Reilly attributes much of this success to the team dynamic that he and Olson plan to maintain:











"I think this company would be nowhere where it is today if Mike had left. Cause while I pride myself in being an engineer from Berkeley, I only did it for two years. My profession - I became a sales guy. And a sales guy should not run a tech company. A sales guy with a strong technical partner can do it... Mike and I sit side-by-side at the end of a long hallway... we are like an airline ticket counter. We want the company to see that we are a team together."

Exhibit 1: Original Pitch Deck (excerpts) for Accel Partners September 2008.



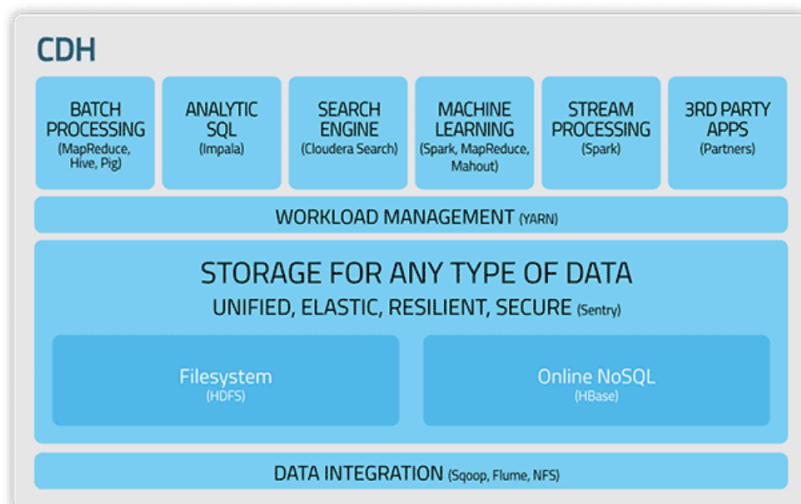
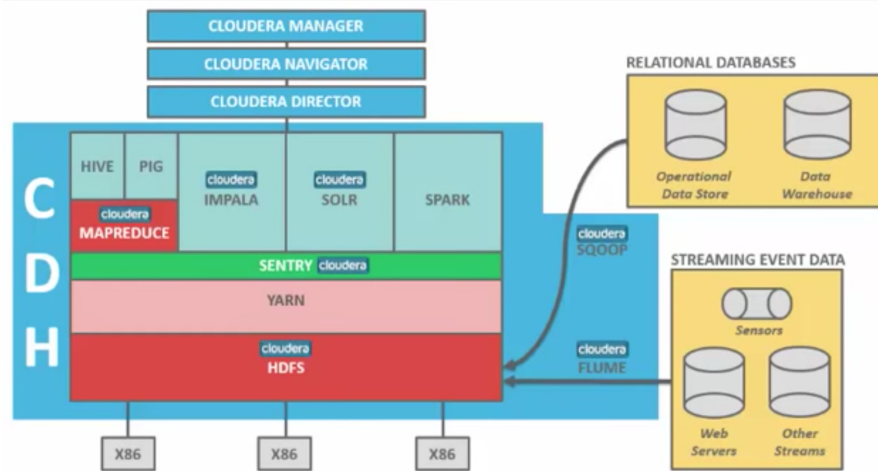
Source: LinkedIn - slideshare.net/AccelPartners/clouderas-original-pitch-deck-from-2008

Exhibit 2: Cloudera funding rounds.

	Transaction Name	Funding Type	Money Raised	Announced Date
<input type="checkbox"/>	1.  Secondary Market - Cloudera	Secondary Market	—	Dec 16, 2016
<input type="checkbox"/>	2.  Secondary Market - Cloudera	Secondary Market	—	Sep 1, 2014
<input type="checkbox"/>	3.  Series A - Cloudera	Series A	\$5,000,000	Mar 16, 2009
<input type="checkbox"/>	4.  Series B - Cloudera	Series B	\$6,000,000	Jun 2, 2009
<input type="checkbox"/>	5.  Series C - Cloudera	Series C	\$25,000,000	Oct 26, 2010
<input type="checkbox"/>	6.  Series D - Cloudera	Series D	\$40,000,000	Nov 7, 2011
<input type="checkbox"/>	7.  Series E - Cloudera	Series E	\$65,000,000	Dec 7, 2012
<input type="checkbox"/>	8.  Series F - Cloudera	Series F	\$160,000,000	Mar 18, 2014
<input type="checkbox"/>	9.  Series F - Cloudera	Series F	\$740,000,000	Mar 31, 2014
<input type="checkbox"/>	10.  Funding Round - Cloudera	Venture - Series Unknown	—	Sep 16, 2015







Source: Crunchbase - crunchbase.com/search/funding_rounds/field/organizations/funding_total/cloudera

Exhibit 3a-b: Two looks at the Cloudera framework.



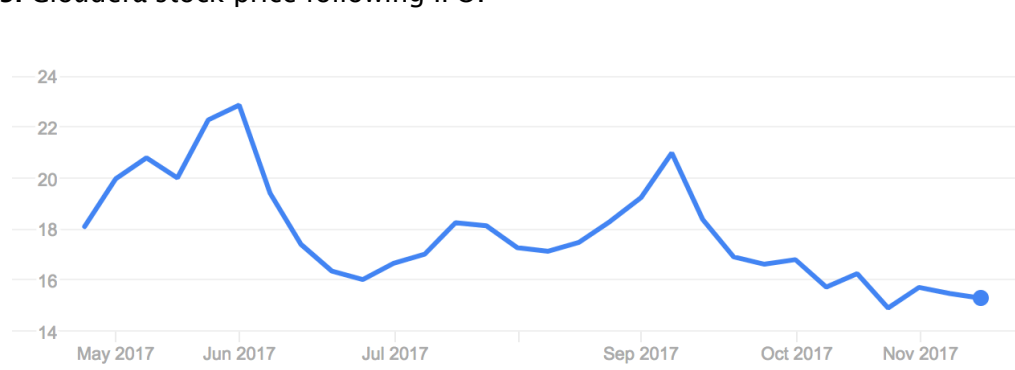
Sources: Cloudera youtube channel - [youtube.com/watch?v=AZovvBgRLIY](https://www.youtube.com/watch?v=AZovvBgRLIY) (a)
 Cloudera - cloudera.com/documentation/enterprise/5-6-x/topics/cdh_intro.html (b)

Exhibit 4: Acquisitions.

<input type="checkbox"/>	Transaction Name	Announced Date
<input type="checkbox"/> 1.	 Myrix acquired by Cloudera	Jul 16, 2013
<input type="checkbox"/> 2.	 Gazzang acquired by Cloudera	Jun 2, 2014
<input type="checkbox"/> 3.	 DataPad acquired by Cloudera	Sep 30, 2014
<input type="checkbox"/> 4.	 xplain.io acquired by Cloudera	Feb 3, 2015
<input type="checkbox"/> 5.	 Sense Platform acquired by Cloudera	Mar 22, 2016
<input type="checkbox"/> 6.	 Fast Forward Labs acquired by Cloudera	Sep 7, 2017

Source: Crunchbase - crunchbase.com/search/acquisitions/field/organizations/num_acquisitions/cloudera

Exhibit 5: Cloudera stock price following IPO.



Source: Google Finance - finance.google.com/finance?q=NYSE:CLDR

Exhibit 6: Patent for “Configuring a system to collect and aggregate datasets”.



(12) **United States Patent**
Hsieh et al.

(10) **Patent No.:** **US 9,317,572 B2**
(45) **Date of Patent:** ***Apr. 19, 2016**

(54) **CONFIGURING A SYSTEM TO COLLECT AND AGGREGATE DATASETS**

(75) Inventors: **Jonathan Ming-Cyn Hsieh**, San Francisco, CA (US); **Henry Noel Robinson**, San Francisco, CA (US)

(73) Assignee: **Cloudera, Inc.**, Palo Alto, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 493 days.
This patent is subject to a terminal disclaimer.

(21) Appl. No.: **12/877,902**

(22) Filed: **Sep. 8, 2010**

(65) **Prior Publication Data**
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Related U.S. Application Data

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(51) **Int. Cl.**
G06F 17/30 (2006.01)
G06F 11/20 (2006.01)
G06F 11/34 (2006.01)

(52) **U.S. Cl.**
CPC **G06F 17/30563** (2013.01); **G06F 11/2023** (2013.01); **G06F 11/3476** (2013.01)

(58) **Field of Classification Search**
USPC 709/217-219, 223-226
See application file for complete search history.

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(57)

ABSTRACT

Methods for configuring a system to collect and aggregate datasets are disclosed. One embodiment includes, identifying a data source in the system from where dataset is to be collected, configuring a machine in the system that generates the dataset to be collected, to send the dataset to the data source, identifying an arrival location where the dataset that is collected is to be aggregated or written, and/or configuring an agent node by specifying a source for the agent node as the data source in the system and specifying a sink for the agent node as the arrival location.

30 Claims, 26 Drawing Sheets



Source: United States Patent and Trademark Office - pdfpiw.uspto.gov/.piw?Docid=09082127