Load DynamiX market expansion: measuring up nicely in storage performance

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2 Feb, 2015

Over the last six years, Load DynamiX has built a customer base that covers a major swath of the storage industry, including but not restricted to every tier-one storage vendor. The company's appliances and software simulate storage loads and measure storage performance, and are used by vendors in product development. More recently, vendors have been increasing their use of the same tools in another role – during product demonstrations to prospective customers. But since 2013, Load DynamiX has been expanding its sales efforts and tailoring its products to suit a different type of customer, namely large enterprises and service providers, which use the tools to boost the efficiency of their internal IT operations. The privately held Load DynamiX says sales to this new type of customer are accelerating, and grew by a factor of 4.5 in 2014, even faster than they grew in 2013. Revenue from vendors also increased by 25% during 2014, but the company predicts that for 2015, about half its total revenue will come from its new class of customer.

The 451 Take

Judging by what it says about its sales and customer numbers, Load DynamiX is on the right track. Exactly how much extra business it can win for itself is limited by the fact that outside of vendors, it is only large enterprises and service providers that currently need its tools. There is, however, a way to sell to smaller companies, via one-off project engagements. Other players selling similar performance measurement tools have spotted the same opportunity, but Load DynamiX looks to have taken the pole position in a race in which there may be only one clear winner. The combination of sales to non-vendors, and vendors' growing use of Load DynamiX's tools for product demonstrations, could generate a virtuous circle in which Load DynamiX would become a de facto standard for simulating storage loads and measuring performance.

Context

Headquartered in Santa Clara, California, Load DynamiX was founded in 2009 as SwiftTest, and launched its first product that year. The company changed its name in 2013 to avoid confusion with the Swift object storage system. Load DynamiX has raised $25m in funding, and its most recent investment round, announced in May 2014, raised $12m and was led by by HighBar Partners. Other investors include Azure Capital Partners, Kinetic Ventures, Benhamou Global Ventures, Miramar Venture Partners, Core Capital Partners and Columbus Nova.

The company was started by engineers from the storage, networking and protocol testing and measurement worlds. Founder and current chairman Richard Bush founded Identity Engines and Caw Networks, with the latter being acquired by test and measurement specialist Spirent Communications in 2002. He also co-founded NAS pioneer Auspex Systems. CEO Philippe Vincent is an engineer who has held senior positions at BigFix, IBM and Accenture. CTO and co-founder Leonard Sheiba founded VoIP pioneer ThinkingVoice Networks.

Alongside its headquarters in Silicon Valley, the company has development centers in Saint Petersburg and Volgograd in Russia. Headcount is now about 70 people, up from about 60 people late in 2013. During 2014, the company appointed as its VP of product management Tim Van Ash, previously senior VP of application performance management at CA Technologies.

The need for enterprises and service providers to measure storage performance while simulating large loads has developed quickly. During surveys completed in 2013 and 2014 by TheInfoPro, a service of 451 Research, storage performance was the second most frequently cited pain point by enterprise storage professionals. For the same survey in 2012, performance was number six on the list.

One reason for this is the replacement of physical infrastructure silos with virtualized servers and shared storage. Enterprise storage is now commonly a shared resource – or private cloud – for a mix of applications that apply changing loads. This has made understanding storage performance far harder. Variable, highly mixed loads are especially challenging for service providers. Another reason is that while new types of storage such as hybrid and all-flash arrays promise to solve performance problems, they also introduce the risk of disappointing ROI, or even outright project failure.

Strategy

Load DynamiX's change of name in 2013 coincided with a change of approach. Until then, Load DynamiX had focused on sales to storage system vendors, which use the company's tools for product development. That year, Load DynamiX stepped up its efforts to sell to other types of organization, namely large enterprises and service providers.

The company says this expansion is not because the storage vendor market is saturated, even though Load DynamiX names every tier one maker of storage systems (as well as multiple tier two and startup suppliers), as customers. Revenue from storage vendors grew about 25% in 2014, as those vendors increased their use of Load DynamiX's technology by giving it a new outward-facing role as a sales tool, adding to its existing use in internal product development.

Load DynamiX says that two years ago, storage vendors did not feel the need to prove the performance of their storage systems to potential buyers. During 2014, that changed, and vendors such as EMC, Cisco, HDS, HP and Pure Storage began using Load DynamiX products during proof-of-concept customer testing. Service providers are following the same route to prove the level of service they deliver, according to Load DynamiX.

This new, additional use of Load DynamiX's products by vendors is linked to usage by enterprises. As more enterprises begin to use Load DynamiX's technology to test and tune their storage infrastructures, more of them may ask storage vendors and service providers to use the same Load DynamiX products to demonstrate performance. As a result, Load DynamiX is hoping to establish its technology as a standard industry tool for performance measurement.

Progress in the new market

Load DynamiX labels enterprise and service providers as IT customers, to distinguish them from vendor customers. Vendors accounted for roughly 70% of revenue during 2014, but Load DynamiX expects that in 2015, sales to IT customers will become the bigger part of its new product business. That would continue an existing trend. The company's sales to IT customers grew by 300% during 2013, and by 350% (factor 4.5) during 2014, far exceeding revenue growth from vendor customers. Including maintenance, Load DynamiX expects that for 2015 it will see about a 50-50 split between revenue from vendor and IT customers.

By the end of 2013, the company had chalked up about 10 IT customers, some of which were gained in 2012 and 2011. Now, Load DynamiX says it has over 20 IT customers. The 350% revenue growth from those customers during 2014 was due to additional orders from existing customers,

bigger initial deals, and higher maintenance revenue.

IT customers now include GE, AT&T, PayPal, Cisco, T-Mobile, ShutterFly and Go Daddy. Cisco appears on two lists of Load DynamiX customers, as a vendor customer and as an IT customer. This is because Cisco uses Load DynamiX products for both product development and optimization of its internal IT infrastructure.

Load DynamiX acknowledges that businesses may not need its products unless they are spending six or seven figures on storage purchases. The sales focus is currently on Fortune 2000 enterprises and service providers, where Load DynamiX predicts there is plenty of room for growth. Deals with these customers have ranged from about $100,000 to $250,000, with a skew to the high end of that range, the company says. But smaller companies have paid between around $25,000 and $50,000 for short engagements, for example, during product evaluations. To reach more of these Fortune 5000 companies, Load DynamiX says it is currently engaging with a handful of partners.

Currently roughly 50% of sales are fulfilled by the channel, but Load DynamiX expects this percentage to rise as it recruits more partners. One challenge that the company acknowledges is that complex products require complex sales pitches, either from knowledgeable resellers or via direct sales support from Load DynamiX itself. The company recently engaged test and measurement specialist Toyo as a reseller in Japan, and says that the hiring of sales engineers is one of its biggest challenges at present.

Sales pitch

Load DynamiX products support block, file and object storage from all vendors. The portfolio has multiple purposes, according to the company. For a specific workload or workloads, it can help determine which type and which particular vendor's storage system would be best.

As an example, Load DynamiX says one enterprise customer used its products in a bake-off of multiple all-flash arrays, and the results led it to buy AFAs from two vendors, because they suited different applications. The portfolio can also be used to answer questions such as which protocols, what hybrid flash-to-disk ratios, and what queue depth settings are optimal for existing or proposed systems, whether data tiering or caching would be more effective, and what performance impact will result from patches, firmware and OS updates.

Load DynamiX says storage engineers are enthusiastic about its products, because it says they not only provide far more extensive measurement than alternative approaches, but also reduce

measurement costs, and reduce the number of servers needed to simulate loads. Some customers buy on these arguments alone.

However, CIOs can be a tougher sell, and need to be convinced of wider returns. Load DynamiX argues that beyond its effects on infrastructure efficiency, a bigger return is in reduced storage capex, resulting from better understanding of systems. According to Load DynamiX, Go Daddy's use of its tools led the Web hoster to predict a 65% reduction in storage costs over a two-year period. Load DynamiX has created an ROI calculator as a tool to persuade CIOs at other companies about potential returns.

Product updates

451 Research has previously described Load DynamiX's technology in detail. During 2014, the company made what it describes as major updates to its suite of software and appliances, which introduce features it says are not available in any other testing tools, and which make the tool more useful for IT organizations.

The company has added the ability to share test results across an entire team of datacenter staff. This change suits enterprises and service providers. Storage vendors have only needed to share results between one or two QA engineers, according to Load DynamiX.

The portfolio has also gained the ability to automatically iterate tests while stepping through a range of values for variables such as block size, read-write ratio and queue depth, to help determine which workloads best suit specific storage systems. Load DynamiX says a large service provider used this feature to make 12,000 performance measurements in a single exercise.

Support for object storage has been expanded to cover the OpenStack Swift, Keystone, and Ceph systems, and the Amazon S3 API. Other new features are the ability to simulate composite loads that might involve multiple protocols and IO patterns, such as Oracle RAC, and the ability to test the performance impact of compression and de-dupe functions used in flash storage. VDI simulation has also been added to the portfolio.

Competition

The market for storage performance measurement tools is small. There are few commercially supported tools, meaning that the most common competition faced by Load DynamiX comes from DIY scripts and freeware tools such as IOmeter and IOZone. While those are obviously low cost,

Load DynamiX says they do not match the capabilities of its products, and they can cause much higher overall costs for measurement projects. 451 Research believes this claim is backed up by the number of OEM vendors that have bought Load DynamiX's products for use in product development, and more recently, product demonstration.

One company that offers commercially supported storage workload generation tools is SANBlaze. However, SANBlaze does not support file-level (NAS) or object storage. Load DynamiX describes SANBlaze as mostly complementary to itself because it says SANBlaze is focused heavily on storage target (or storage system) emulation, for use by storage network vendors as proxies for large storage arrays, and not for use by IT organizations.

The giant of the workload testing space is Ixia; although it's known for its IP networking capabilities, it has expanded into the storage space and is targeting storage systems developers. It has also declared the enterprise market as a major focus for 2015. So far, Load DynamiX says it has not seen Ixia compete for business from either technology vendors or end-user enterprises. Load DynamiX believes this may because of Ixia's network rather than storage origins, and says its own six years of storage history provides it with a substantial technology advantage.

Another company offering products in broadly the same field is Virtual Instruments. Load DynamiX describes Virtual Instruments as a potential competitor for wallet share, but not a competitor at a product level, and indeed argues that all Global 1000 should be using both Load DynamiX and Virtual Instruments to gain a full picture of storage performance. That would involve the use of Load DynamiX for pre-production and evaluation, and Virtual Instruments for production, after implementation.

Virtual Instruments said that its products are increasingly used to assess the performance of all-flash arrays, and that this quarter it will launch a 'flash workload evaluation' tool. However, Load DynamiX says that Virtual Instruments currently has no ability to generate or simulate loads, and points out that Virtual Instruments' tools require network taps to be installed – which is a labor-intensive task.

SWOT Analysis

Strengths	**Weaknesses**
Load DynamiX's customer and partner base is impressive for a company of its stature, while it benefits from a storage-only focus and little direct competition.	The company is still little known outside of the confines of its initial target market of storage 'stack' providers.
Opportunities	**Threats**

The company has a unique take on solving some intractable storage problems, while the emergence of flash means there more interest than ever in IOPS comparisons.

Load DynamiX's biggest challenge in its effort to expand beyond its OEM niche may be to convince sufficient end users that this is a problem worth investing non-trivial sums to address.