HOW CLOUD TECHNOLOGY BRIGHTENS THE OUTLOOK FOR ONLINE RETAILERS

Smaller web merchants especially benefit from the power and sophistication available in the cloud.
WHY THE CLOUD IS SO IMPORTANT FOR ONLINE RETAILERS

A recent study from research firm IHL Group concludes that 47% of retailers’ spend on e-commerce technology will be for cloud-based software. That percentage keeps ticking up each year, and there are good reasons for that.

Cloud-based technology—which refers to computer facilities full of internet servers that offer retailers data storage, web hosting, test environments and software they can access via the web—is especially useful for e-retailers.

For one, retail is a seasonal business and that means an e-retail site is likely to get a lot more traffic in November and December than in February or July. If a retailer hosts its own website it must buy, maintain and keep software updated on several servers it doesn’t need for much of the year. By relying on hosting via a cloud provider, it can easily ramp up its capacity when needed. And it doesn’t have to worry about software upgrades, security patches and other time-consuming and costly chores.

Then there is relying on software-as-a-service vendors to host applications, rather than maintaining them on a retailer’s own servers. Here the advantage primarily is that the software vendor can make an upgrade one time and offer it to every client, often without the client lifting a finger. It’s quite a different matter when upgrading software maintained in-house, as every upgrade means checking to ensure that not only it works, but that it doesn’t interfere with other software the retailer has deployed.

Cloud providers can also offer huge amounts of data storage, which is increasingly important as online retailers collect so much data from the many ways they interact with their customers. And cloud technology is a convenient way for a retailer to quickly spin up a test on a web-based server, shutting down the experiment when it’s finished. All without buying, installing or maintaining hardware or software.

Because these services are so useful, providing web-based technology became a big thing over the past decade. It even got a new name: cloud technology. And the tech giants that dominate the space, such as Amazon.com Inc., Microsoft Corp. and Alphabet Inc.’s Google unit, keep adding intelligence and utility to their services. For example, a marketing system housed in the cloud keeps pace whenever social networks like Facebook or Pinterest add new features, so that a merchant doesn’t have to worry about updating its interface with those social networks. Same with the introduction of new smartphones: Cloud providers make sure their services work with the new phone, and the business of client merchants goes on uninterrupted.

Given the intense competition among big cloud providers there’s little doubt cloud-based services will keep improving.

Given the intense competition among these big cloud providers there’s little doubt cloud-based services will keep improving. And that will make it increasingly appealing for retailers to leave the hosting and maintenance of their servers and software to specialists, so they can focus on marketing and merchandising that they know best.

Don Davis, editor in chief, Internet Retailer
When two retail giants get into a public spat over a technology you can bet that technology is important. And the June 2017 dust-up following reports Wal-Mart Stores Inc. had asked suppliers not to use Amazon.com Inc.’s Amazon Web Service cloud-computing unit (see story page 9) highlighted the increasingly crucial role of cloud services in retailers’ operations.

The bad news for Amazon’s competitors is that Amazon Web Services is highly profitable, generating nearly $4 billion in operating profit in the five quarters starting with Q1 2016, 77% of Amazon’s operating income through Q1 2017. That provides billions of dollars for Amazon to invest in such customer-snatching services as Amazon Prime and fast and free delivery.

But the good news for other retailers is that Amazon Web Services and competing cloud services such as those from Google Inc. and Microsoft Corp. keep adding internet-based computing, web-hosting and data-storage capabilities that are readily available to Amazon’s rivals. Smaller startups are leveraging those cloud-based capabilities to provide new ways to shop and supply goods, carving out their own niches. And established merchants are finding that putting their entire operations into the cloud is necessary to take advantage of the next big thing in sales or marketing, as new technologies increasingly are being built on foundations of cloud technology.

Online-only bespoke shoe store True Gault is one retailer using the cloud to refashion the way high-heels are bought—and made. The two-and-a-half-year-old company, part of Google’s startup accelerator program, sells entirely through an iPhone app that uses 3-D imaging technology to scan customers’ feet and create detailed, unique left and right foot sizing profiles. The customer then scrolls through available materials and shoe options—heel height, color, material, etc.—to design her own pair. Her design, along with her fit data, are stored in the cloud and thereby easily accessible to True Gault’s shoe manufacturer in Spain, which creates and ships the single $250 pair within three to four weeks.

The business model allows True Gault to carry no inventory, provide additional perks (dog ate your left shoe? Get a new one), and gain reams of valuable consumer and trend data that it leverages immediately, says CEO Sandra Gault. “Our secret sauce is in the data analytics and the process flow,” she says. “It is like taking an Excel spreadsheet and making it run our entire system.”

“We’re not a shoe company, we are a mathematics company disguised as a shoe company.”

—Sandra Gault, CEO, True Gault

WE KNOW WHAT CUSTOMERS ARE THINKING

That is only possible by having the entire system in the cloud. True Gault uses many open-source tools—meaning freely available technologies—that help it...
Meet the next generation of cloud-based e-commerce platforms

Cloud-based technology is more robust, powerful and flexible than ever. Today’s software-as-a-service e-commerce platforms—those that are hosted online and accessed by users via the web—offer a full suite of customizable features retailers can use to create unique, feature-rich websites, as opposed to the cookie-cutter websites that were synonymous with them just a few years ago.

At the same time, cloud-based software and service providers are making it easier for retailers to connect applications they already use, such as shipping solutions and inventory management software, to their website and share data among them in real time. Connecting an inventory management system to the e-commerce platform through an application programming interface allows a retailer to display up-to-date inventory availability to customers on the website, and automatically update inventory counts in the inventory management system after each online purchase. “Five years ago cloud based technology was not as open as it is today, which restricted what retailers could do with it,” says Jimmy Duvall, chief product officer for e-commerce platform provider BigCommerce. “Today, the openness of cloud technology lets retailers own the customer experience without having to invest the resources internally to continually develop new technology.”

The growing sophistication of cloud-based e-commerce platforms means retailers have more tools to expand their business to other online sales channels, such as Facebook Inc. and Amazon.com Inc. Making the integration paths to a Facebook webstore and online marketplaces such as Amazon within a cloud-based platform spares retailers the cost of creating and maintaining separate product catalogs for those sales channels in-house or hiring a vendor to do so.

BigCommerce’s platform has ready-made integration paths retailers can use to synchronize their product catalog to Amazon and Facebook without having to write or edit existing code. To use this capability, retailers using BigCommerce’s platform only need to turn on these features in their management dashboard.

BigCommerce’s platform allows e-retailers using Facebook’s Shop feature to checkout on Facebook. Facebook launched Shop in 2015. The feature lets a retailer add a Shop tab to its Facebook page and feature products consumers can buy without leaving Facebook. Through BigCommerce’s integration, all Facebook orders are automatically synced with the retailer’s online store.

“We provide the capability for retailers to manage inventory in one place, push it out to multiple marketplaces and process transactions through webstores in other channels with the flip of a switch,” Duvall says.

“That’s a huge plus for retailers looking to grow their business, because they need to be where their customers are online and many consumers shop through Facebook and Amazon.”

One advantage of using web-hosted software-as-a-service programs is they are typically low maintenance for the user. BigCommerce, for example, manages its platform and rolls out updates and new features, like support for Apple Inc.’s Apple Pay payment technology, to users automatically. “Including upgrades like support for Apple Pay on the web into our core platform allows retailers to offer the latest features and functionality consumers expect as soon as they are ready, with little or no effort on their part,” Duvall says. “we make adding new features a series of on and off switches for the retailer.”

As part of its service, BigCommerce performance tests all new features under a variety of conditions and makes sure those enhancements do not compromise data security within its platform before rolling them out to customers. By taking on technology development and platform maintenance, BigCommerce can reduce a retailer’s e-commerce platform costs by as much as 75% compared to developing and maintaining a platform in-house, Duvall says.

Another benefit of BigCommerce’s cloud-based platform is that scalability during peak periods, such as during the holiday season, is included as part of a retailer’s monthly fee. This assures retailers they will have the on-demand capacity needed to handle unexpected traffic spikes that can slow website performance and lead to a poor customer experience.

“With a cloud-based platform, retailers can focus on their core business instead of becoming technologists, which helps them become more successful,” Duvall says.
Sell more, everywhere

BigCommerce is the ultimate solution for omni-channel retailing, serving as the hub for your online store, retail store, online marketplaces and social media.

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operate a business with almost no physical pieces besides the product, and one that is immediately responsive to its customers, Gault says. “We have lots of leading indicators to tell us what customers are thinking. We know when they download the app, how they play with it, what they put in the cart, exactly who bought each pair.” True Gault can use that knowledge to push content or reminders to customers through the app, which also automatically follows up after each purchase to find out how well the shoes worked out.

“We think the future of internet retail is all about data analytics and getting as close to the customer as possible,” Gault says. “When Suzy Smith buys a pair of shoes, we know the lifecycle valuation of her—When does she buy? How often? What triggers her to buy?” Through the Google accelerator program True Gault gains, among other perks, access to and assistance with Google marketing and analytics products, which are all entirely cloud-based. This allows the retailer to determine which ads customers click on and when, and incorporate that data into the app quickly.

Altogether, Gault says the whole process comes down to creating a “mathematical personality for every customer, right down to her left foot and right foot.” (For the record, though True Gault works closely with Google to build software, much of its data is hosted on AWS, based on the company’s reputation and pricing, Gault says.)

In addition to making shopping interactive and personal for customers, the cloud-perks of being able to access all the data from anywhere offers two distinct advantages, Gault says. For one, the retailer doesn’t need to spend any resources predicting what will be in style several seasons out and making sure to have the inventory that will be in demand. Instead, as soon as a celebrity walks down the runway in a bright yellow shoe, True Gault can offer its own version of the look, at least as an image a customer can select.

Secondly, global expansion is simplified, she says. Because the shoe data are all readily available and in a format accessible to any software system, opening for business in South America, as the company plans to do, for example, is mostly a matter of finding and opening a factory, Gault says. The rest of the app interface, including languages, customer service options, or regional preferences, can be easily adjusted and tweaked from home base, she says.

In 10 years, the True Gault platform will be entirely different, Gault says. But she is certain that it will still involve a cloud-based experience where customers can see and interact with products, and talk to other customers about them, all in an app before buying anything.

“I think the future of retail is not about making products and moving those products,” Gault says. “We’re not a shoe company, we are a mathematics company disguised as a shoe company. The future of retail will be: I am a mathematics company disguised as a fill-in-the-blank.”

**LITTLE ASSEMBLY REQUIRED**

While not all businesses are building their own applications and services within the cloud, many are selecting new third-party technologies built that way for their agility, dependability, and ease of use.

Another e-retail startup, lingerie merchant Adore
Me, found that switching to Mobius Solutions’ cloud-based marketing services tool Optimove allowed it to save significant manpower and time in managing campaigns, ultimately providing a three-fold return on the investment, says Adore Me business and brand development analyst Iris Voltaire. “An advantage we see in cloud-based technologies is that they’re ‘plug and play,’ there is no heavy setup needed prior to start using the software—the full hosting and handling is provided by Optimove,” Voltaire says. This also makes it easy to connect the marketing tool with technology from other third-party vendors, which are integrated directly into the Optimove interface, Adore Me uses, she adds. That way the retailer can use its cloud connection to access, for instance, three different communications tools—one for push notifications, one for e-mail and one for direct mail—all from one place.

Because Optimove handles all the hosting, she says, Adore Me can also rely on the data it provides being constantly up-to-date. It’s also up to Optimove to handle any surge in data-intensive queries—such as a sudden spike in site traffic or a massive campaign launch—without the retailer needing to worry about adding hardware to handle the added volume.

Tushar Patel, chief marketing officer of omnichannel platform provider Kibo, notes three main benefits to selecting a technology provider that has built its applications in the cloud: the agility to handle fluctuating data needs, as Adore Me’s Voltaire noted; the ability to remove IT personnel or considerations from the day-to-day managing of a business, since a cloud-based vendor constantly updates all hardware and software on behalf of its entire client base; and the connectivity it can provide between disparate business areas and team members, for example, providing geographically dispersed colleagues access to a common set of data. Without first building from the cloud, each of these facets becomes its own issue for a retailer to manage, Patel says.

Brian Dhatt, chief technology officer of e-commerce platform provider BigCommerce, adds that, given the immediate and easy accessibility of all types of business data in a cloud installation, the real business advantage is being able to build and deploy many new applications for merchants—and fast. For example, when Google launched an open-source project called Accelerated Mobile Pages, or AMP, to allow content-heavy web sites to load quickly on mobile devices, BigCommerce jumped to create a version for its e-commerce clients. The vendor’s team built and begin testing their Google AMP application in one month, Dhatt says.

While BigCommerce initially began as a platform primarily focused on hosting e-commerce sites, today Dhatt says the company is pushing instead to bring in more specialized expertise—through hiring and acquisitions—around the applications that merchants want to promote selling and more effective promotions and other forms of merchandising. When it adds new features to its platform, retailers can select them from the BigCommerce marketplace—and sometimes retailers even contribute to it.

**LOW MAINTENANCE**

One of those retailers that became a contributor to the BigCommerce technology store is Spectrum Audio, an online retailer of audio visual equipment. After moving from a not-fully-cloud-based store on the Magento e-commerce platform to BigCommerce, Spectrum paid a developer to create its own custom application called Quote Ninja, which allows sales representatives to provide custom quotes for large orders, says CEO John McCann. “It was one of those things where we had the same capability in Magento, but I was spending too much money and time to hold it all together, and I couldn't just take it and resell it to someone, or plug into whatever other store,” he says, referencing his four other e-commerce businesses.

He likens the experience to owning a luxury sports car: “It starts on the first try, gets you to your destination without issue, and generally does so in style. Self-hosted solutions on the other hand, are like race cars; they can do all the things you dream up, but you’re working on them 95% of the time. Sometimes you’re lucky if they make it down the drag strip without blowing up!”

Soon after launching his app, McCann received several one-off orders for a $1,500 item on Spectrum Audio—so he sent a quote and a few weeks later got an order for 100 of them. What really proves the value of the app to him is “the sheer fact that I was probably asleep when the quote came in, and I was able to build something that powerful on top of a software-as-a-ser-
vice [cloud-hosted] solution,” he says. And after using the app internally for about a year, McCann began licensing it to other BigCommerce merchants—including some competitors—for an additional small profit, he says.

This is only possible because the app is hosted in a cloud system, McCann explains. Other users need only to click a button to start using it, while he and his developer invisibly push updates to them all continuously. “The time investment required to maintain a self-hosted store with third-party apps is highly underrated in my experience, and almost always costs more than ‘renting’ highly-optimized SaaS solutions,” he says.

**CLICK TO ADD FEATURES**

Another convert to the cloud is Carissa McQueen, operating officer and director of business development and communications at Henna Caravan, a small family business that has been selling hair dyes and henna supplies online for two decades. She says the sophistication of what cloud-based technology providers can add on top of simple web hosting is now the draw for online merchants—Henna Caravan also recently switched from another e-commerce platform to BigCommerce.

“Having options added as the software platforms are being developed and using that to improve communication with customers has improved business,” she says. As with McCann, she appreciates the savings in time and energy when she can find a feature on the app marketplace, live chat with a BigCommerce representative about it, and deploy it in hours—a feat she says may have taken weeks previously when coordinating with individual developers.

Although Henna Caravan has been on the new platform for only about a month, the retailer has seen average order values up by about $5. McQueen attributes this in part to being able to use new-to-her-business marketing and merchandising features, like running the company’s first coupon promotion and being able to add short videos to the product pages, she explains. Now she says she’s excited to try out newer options on the marketplace to integrate her store with Amazon and Instagram. “They weren’t even on my list of features to look for, but it is definitely a bonus,” she says. “It’s great to have a platform that is always going to be current and will always keep us competitive.”

McQueen says of she and her sister, who founded the company, “everything we’ve learned about business and computers, managing, has been through friends and tutorials, and when we reach the end of our ability to do that, looking at the cloud-based options was the next step. You can only bootstrap yourself so much.”

Traditional e-commerce—meaning the do-it-yourself brand of building and maintaining internally a retail website and the associated marketing systems—may be nearing the end of its useful life. Today’s e-commerce is about much more than simply being available from various devices. It is about rethinking what that allows a merchant to do, from its marketing strategies to its entire business model. Especially for smaller retailers, the computing capacity and e-retail services available from cloud providers allows them to punch far above their weight.

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**WHAT THE CLOUD MEANS TO AMAZON**

(Amazon’s total operating income and income from Amazon Web Services, in millions)

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*Source: Internet Retailer analysis of Amazon.com Inc. reports*
Omnichannel capabilities are becoming crucial to providing the high-quality, personalized shopping experience today’s online customers demand, and retailers are challenged to ensure their websites can keep up. As a result, they’re feeling pressure to innovate quickly or face getting swallowed up by the competition.

But with many retailers still on legacy, on-premises systems, innovation often seems out of reach, says Jennifer Sherman, senior vice president of product strategy at Kibo, an omnichannel commerce platform provider.

“A radical shift in a retailer’s technology strategy, such as moving to cloud-based technology, may pose a lot of intimidating questions,” she adds, “such as ‘How will cloud-based systems integrate with non-cloud, on-premises systems?’ and ‘How much will this cost?’”

While adopting cloud technology tools may at first seem like an expensive or risky undertaking, Sherman says it doesn’t have to be. “With the right partner, retailers can work around these obstacles to harness the benefits cloud technology offers,” she says.

One of those benefits is the total cost of ownership. “Retailers save substantially on the cost of resources. They don’t need to keep all those costs on their books because, with cloud technology, they are not responsible for operations, maintenance, data center, and owning the code and all that goes along with it,” Sherman says.

Velocity is another invaluable benefit of cloud technology, Sherman says. “When a retailer moves to cloud technology and works with a vendor who is investing in that technology, the retailer can innovate at the pace that vendor delivers,” she says. “That retailer doesn’t have to go through costly upgrades to get the next feature or to rollout the next omnichannel programs. It can move as fast as the business wants to, rather than at the rate its technical team can handle.”

Finally, Sherman says, cloud technology allows retailers to innovate faster than ever before. “Cloud technologies can be rapidly adopted and generally built for quick rollout,” she adds.

According to Sherman, cloud technology vendors can be more experimental, and add more solutions to the mix without adding a lot of costs to integrate manage and maintain them—and a retailer can take advantage of what that vendor is doing in new and unique ways to build out its own unique brand presence.

“Together, velocity and innovation speak to the ability to be agile,” Sherman says. “To learn what is successful and build on it in more modular steps rather than big bang upgrades that require ROI justifications and large investment.”

Sherman says that every time a consumer has a great shopping experience, their expectations are forever raised. “That is a tall enough order for retailers to keep up with,” she adds. “Technology solutions should be a merchant’s support system, helping them innovate, keep pace and express their unique brand voice not slowing them down with technology stack, upgrade and maintenance concerns.”

Kibo helps retailers seamlessly implement cloud-based technology to improve operations on both the front end and back end. “Whether a retailer is selling through kiosks in a store, in a marketplace, online or on a mobile device, Kibo powers those selling experiences in the cloud with an integrated suite of technologies that understands the customers, their histories, and the retailers’ products, pricing and promotions—everything needed to power those selling experiences,” she says.

On the back end, Kibo uses cloud technology to help retailers fulfill orders anywhere. “Whether that customer wants to pick a product up in a store or at a partner location, or she wants that product shipped, we can enable that fulfillment,” Sherman adds.

According to Sherman, cloud technology allows retailers to be more experimental as an industry—to figure out what consumers want and adapt accordingly very quickly.

“Ultimately, the capabilities cloud technology offers drive higher conversion rates, higher average order values, and higher customer loyalty—which leads to higher lifetime customer value—all because the technology allows that retailer to deliver a better brand experience from sales to fulfillment,” she says.
Stay ahead of consumer expectations, adapt to changing market conditions, and bring together your marketing, operations, and fulfillment systems to deliver truly personalized customer experiences across all channels with Kibo’s omnichannel retail solutions.
Behind the Amazon vs. Wal-Mart cloudburst

Wal-Mart Stores Inc. made headlines earlier this year when it informed some technology companies that, to get Wal-Mart’s business, they would need to host their applications on servers other than those belonging to Amazon.com Inc.'s Amazon Web Services (AWS).

Some observers surmised that Wal-Mart didn’t want its most powerful competitor to have access to its proprietary data. Others thought the main motivation was to avoid subsidizing Amazon’s retail sales by supporting AWS, which has in recent years has become the top supplier of cloud hosting technology to businesses and government agencies and which in some quarters produces more profit than Amazon’s retail business.

The latter reason is the real story, says Scott Webb, analyst at the retail technology consultancy Avionos. “No impartial third party would say you are truly at risk of Amazon snooping your data,” he says. But given the huge market weight of both Amazon and Wal-Mart, the question now is whether this move, over a technology service that has become essential for modern business, has the potential to disrupt the status quo for other retailers.

It’s not new for a business to assert influence over which technology components its vendors use, such as by declaring they will only use one operating system or spreadsheet service, Webb says. “Is that all this is, or is it the opening salvo in a kind of pitched battle about how Amazon and Wal-Mart are going to set terms?”

A few technology providers moving to another cloud service provider, such as Google Inc. or Microsoft Corp., won’t stop AWS. But Webb says if other large retailers—say Target Corp. or Safeway Inc.—began to follow suit, the slower growth of profit from AWS could deter Amazon from big investments, such as its $13.7 billion bid to buy high-end supermarket chain Whole Foods Markets. And that, ultimately, could influence how Amazon makes its business decisions, for instance by forcing it to charge higher prices on Amazon.com to improve its profit margins in historically low-margin categories it may now subsidize with funds from other areas, Webb says.

Wal-Mart’s response is coy. “Our vendors can choose to use whichever cloud provider best meets their needs,” a spokesman tells Internet Retailer. “Where our most sensitive data is involved, we prefer it not sit on a competitor’s platform.”

Meanwhile Amazon suggests AWS is not subsidizing its retail businesses. “We’ve heard that Wal-Mart continues to try to bully their suppliers into not using AWS because they have an incorrect view that AWS is somehow supporting Amazon’s Retail business, which in North America generated more than $2.3 billion of operating profit in the last 12 months despite investing billions of dollars in initiatives, including Prime Video and Alexa devices and services,” a spokesman writes by e-mail. (What he didn’t mention was that as recently as the third quarter of 2016, Amazon’s operating income of $575 million would have been a loss without the $861 million in operating profit provided by AWS.)

Plenty of suppliers are standing up to Walmart and refusing to be told that they can’t use the leading infrastructure technology platform (AWS),” the Amazon spokesman went on. “Tactics like this are bad for business and customers and rarely carry the day.”

At least one vendor, omnichannel commerce platform provider Kibo, thinks it will ultimately be hard for Wal-Mart to enforce such a rule. “If you look at AWS and the amount of software companies going there, the reality is they are not just ahead of the market but they are significantly ahead of the pack; they’ve separated themselves,” says Kibo chief marketing officer Tushar Patel. If a retailer client asked Kibo to leave AWS, Patel says Kibo would most likely try to talk them out of it.
For 18 years, Internet Retailer has delivered the valuable facts, figures and analyses needed to cover the digital transformation in retailing. Our coverage has helped to drive the industry forward. Now, our team of journalists and researchers offer the same authoritative journalistic approach to new waves of digital transformation in B2B Commerce and Healthcare Services. And we’re bringing it all together in one place:

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