



# THE CLOUD AND CROSS-CHANNEL RETAIL

HOW AND WHY THE CLOUD WILL IRREVOCABLY  
CHANGE THE WAY RETAILERS DO BUSINESS





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## THE CLOUD COMES OF AGE

The need to drive a consistently optimal customer experience across all retail channels has led to unprecedented change and complexity in the retail sector. Leaders in the online space are those that innovate the fastest in order to offer the most engaging and reliable digital experience, whether customers are buying through a computer, tablet, smartphone or TV, day or night. At the same time new online entrants are grabbing market share, margins are being squeezed tighter than ever, the high street model is being forced to evolve, and those unable to compete are being forced out.

In parallel with all this change is the emergence of cloud computing, seen as a key enabler for online businesses to deliver cost-effectively and reliably. While some still see it as a buzzword and others still have doubts over security, the cloud is increasingly seen as the future for retail IT, allowing online retailers to handle peaks and troughs in demand in a cost-effective manner and without having a vast IT infrastructure sitting idle much of the time. It also opens up new opportunities for flexible testing and rapid launch of new applications, and sites to support new initiatives, campaigns and promotions.

This independently authored paper gives a snapshot of cloud in the world of cross-channel retail: what it is, what is isn't, how it's being used now and where it's going in the future. It incorporates examples and views from online retailers at the coalface.

*John Tridgell*  
Enterprise marketing manager, Rackspace

### KEY POINTS:

- Companies need to prepare for a new retail environment, that of cross-channel retail, where customers interact with companies across different touchpoints
- The cloud offers flexibility and scalability to help retailers succeed in this new world
- The cloud offers potential cost savings
- Having extra capacity to deal with peaks and troughs, something the cloud can provide, is key in retail
- Using the cloud helps free up senior IT staff to work more strategically

## CONSTANT EVOLUTION

In the age of the world wide web, it's easy to think of retail as having suddenly been revolutionised by ecommerce after years where nothing much happened. Paradoxically, this is in many respects a nostalgic view of the past, calling to mind years when our high streets didn't much change. It's also a false view when you consider how those working in retail in the past few decades have had to negotiate the rise of the supermarkets, the increasing number of out-of-town shopping centres and the increasing internationalisation of many well-known chains.

Seen against this backdrop, the new idea of cross-channel retail, which emphasises customers interacting with retailers across multiple channels, is just the latest disruption in a constantly changing and dynamic sector.

Yet there are constants. One reason we're so constantly pulled back to the idea of the stolid and unfailingly polite local shopkeeper is because service matters. It's no coincidence that a cross-channel world is also one where personalisation and talking individually to customers are both important.

In other words, we're entering a future where retailers face yet another new challenge, the cross-channel world, and a variation on a familiar challenge, that of offering great customer service. It's a future where retailers will need to be increasingly flexible, able to respond to customers in real-time, or close to real-time, across multiple touchpoints. The cloud, inherently scalable and flexible, can help retailers meet both challenges.

*Jonathan Wright*  
Co-editor, Internet Retailing supplements

## THE CLOUD AND CROSS-CHANNEL RETAIL

**T**he idea of the cloud being central to the way companies operate is coming of age. To name just a few scenarios, whether companies are making applications available to staff, upping computing power at times of peak demand or quickly calling in extra capacity when working on time-sensitive projects, the advantages of using the cloud are becoming clearer and clearer. Something that sounds inherently wispy and floaty turns out to offer substantial and tangible business benefits.

That said, we're in the early days of what we might call a cloud 2.0 world. If the cloud 1.0 era was in many respects largely about software-as-a-service, cloud 2.0 also emphasises a sophisticated use of infrastructure-as-a-service that goes far beyond digital storage. More specifically, forward-looking businesses are questioning whether the cost associated with owning and running a data centre with enough capacity to cope with temporary jumps in demand is really worth it.

This kind of thinking, which we might characterise in some respects as analogous to a move from outsourcing parts of back-office operations to trusting core tasks to a partner outside the company, is understandably a big cultural shift for many businesses. Nevertheless, it's one retailers in particular need seriously to consider for reasons that can be embodied in one word, Christmas. Which is of course another way of saying that retailing is inherently a business of peaks and troughs, of high demand and days when it seems like the world has given up on shopping for shoes forever.

There's another factor to consider here too: the inexorable shift towards cross-channel retail. Gone are the days when consumers either shopped online or went to the high street, today's consumer is just as likely to do research on an iPad prior to placing an order via mobile for an item they'll pick up in store during a lunch break or after work. Retailers trying to make sense of the increasingly complex 'big data' this generates, which goes over and above the information generated by customer information via a company's own website, are increasingly likely to need extra capacity when crunching numbers or nimbly putting together a merchandising campaign to reflect patterns of consumer behaviour revealed by this data.

Over the next few pages we'll look at these and other core issues around the cloud and cross-channel retail. We will set out the key strategic considerations that decision-makers need to take into account when deciding, firstly, whether to opt for the cloud and, secondly, the factors to consider when deciding how to use the cloud.

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## THE CLOUD DELIVERS



Last year, Domino's Pizza began a project to outsource its data centre and took the decision to move some of the company's IT infrastructure onto the cloud.

"We have all our development and test systems in the cloud, as well as some of our back-up and redundant systems," says Colin Rees, Domino's IT director. "It was really a case of us putting a toe in the water to check for pitfalls and understand how it could benefit us, before going for a bigger adoption."

Colin's caution is understandable as Domino's is the UK's largest pizza delivery company, with online sales of just over £183 million in 2011. Domino's needs reliable and robust systems. Therefore, it has been reassuring for Rees to discover that his staff often can't remember whether or not they're using cloud-based servers as part of its hybrid cloud agreement with Rackspace.

"It is so seamless, we really don't know," he says. "The only difference is we power the servers down and don't have to pay for them. That's how I would rate the success of using cloud: we can't tell the difference."

Looking ahead, Rees is keen to make more use of the cloud to deal with peaks in customer demand. It's a big step and Domino's still has concerns over guaranteeing service levels, so the next phase may be a few months down the road, but Rees is an enthusiast for the flexibility and scalability that cloud offers.

"Not surprisingly, we do most of our sales in the evening over dinner times," he says. "The ideal for us would be to be able to spin up servers just for that three-hour rush in the evening and then turn them off after that. That's definitely where we've got our sights set."

## WHAT EXACTLY IS THE CLOUD?

Before moving on to look at the evolving uses of cloud-based services and technologies within the retail sector, it's worth pausing to reflect on how we should define the cloud – if only because it's one of those terms that means different things to different people, encompassing everything from consumer-facing services such as email to high-end, industry-specific applications.

A widely used definition comes from IT consultancy Gartner, which defines the cloud as "a style of computing in which scalable and elastic IT-enabled capabilities are delivered as a service to external customers using internet technologies".

This covers the essentials, but we need to drill down further to capture the kind of nuances that chief technical officers grasp instinctively. In particular, there are three main cloud-computing models:

- The public cloud: where a service provider makes resources available over the internet, either on a pay-per-usage or free basis. The organisation providing the services owns these shared resources and they are available to a wide range of customers.
- The private cloud: here, a cloud solution is held behind a company's own firewall, and it's typically used where companies need greater degrees of privacy and security. It uses dedicated infrastructure. The solution can be managed either in-house or outsourced.
- The hybrid cloud: this is a pairing of the public cloud with other IT infrastructure. This might be a mix of the public cloud and a customer's own dedicated hardware; a customer's hardware running as a private cloud and linked to the public cloud; or a mix of the public cloud and a virtual private cloud.

Each of these has different advantages and disadvantages. Using the public cloud, for example, is typically the cheapest option, yet companies may have security concerns over its use. The private cloud, by contrast, is as its name suggests exclusive and a company can customise a key application behind a firewall, yet running costs are higher, not least because of the expenses involved with hosting.

The developing hybrid space seeks to offer the best of both worlds. Another way to look at the hybrid model is to consider it in terms of types of information: a retailer will need to keep payments data behind a company firewall in order to be PCI compliant, but may be less sensitive about storing such assets as images and video.

“It’s not as some suppose the proliferation of channels that causes problems for retailers. Rather, the challenge lies around integrating these channels”

### FIRST STEPS

Out in the real world, hybrid cloud solutions are increasingly becoming the norm, yet the growing number of options only increases the complexity for decision-makers. So what are the key factors that companies need to look at when considering whether to use the cloud?

Fundamental to answering this question is understanding the organisation’s overall IT needs. In larger companies, it can be tough to get an accurate picture but this issue can’t be sidestepped. There’s an allied consideration here: many companies’ IT infrastructure rests on legacy systems that are usually inherently stable until they are changed in some way to fit new requirements. This may affect what can be done on the cloud. Similarly, some legacy applications won’t work with the cloud because they were never designed to be scalable or virtualised.

Forearmed with this knowledge, it’s possible to frame further questions that will reveal much about whether, where and when the cloud might be employed. These include:

- How much of the company’s IT infrastructure is utilised 100 per cent of the time and how much is mainly dormant, waiting to deal with spikes in demand?
- How predictable are these spikes?
- How often does the company need IT capacity to crunch numbers or work on one-off projects?
- What’s the company’s stance on security and privacy of information?
- What are the costs associated with owning and running existing IT infrastructure versus the cloud?
- What kinds of applications are staff using, and are there security issues with using these applications in the cloud (risk profiling)?
- What will the impact be on existing workflows and ways of doing things?
- How are the company’s IT needs likely to evolve over the next few years?

Turning more specifically to retail, the advent of cross-channel introduces complexity in terms of consumers having more touchpoints with the company. However, it’s not as some suppose the proliferation of channels that causes problems for retailers. Rather, the challenge lies around integrating these channels.

This is especially important when considering how the IT needs in retail are likely to evolve over the next few years. Recently, *Internet Retailing* and its sister magazine *Screenmedia* spoke with Giles Colborne, managing director of usability experts expartners, about design issues in a cross-channel environment. He didn’t, as you might expect, emphasise creating intuitive-to-use interfaces, important as these are, so much as “having a set of functions and data that you can then present on whatever device you’re using”. Having this consistency, being able to handle the sheer amount of data necessary to effective cross-channel retail, sets companies up for the future so that it’s far easier to roll out new digital projects.

To return to a point made earlier, one way to look at the larger IT challenge facing retail in the near future, and cloud will likely have a key part to play here, is in working with the big data generated as customers weave their way across channels in idiosyncratic ways.

## CLOUD IN THE DNA



In 2006, Dirk Hörig co-founded the ecommerce platform provider **commercetools**. Having been involved in the ecommerce arena for several years, Hörig, now the company's CEO, was unhappy with the existing software aimed at enterprise-level merchants. What if his company could come up with a solution that was scalable, flexible and offered options for customisation at both the front end and back end?

A year later, the cloud-based **commercetools** was launched, an ecommerce platform where retailers pay on a per-transaction basis, with discounts for volume. "Our customers don't have to invest in any software licences, they don't have to invest in any hardware," says Hörig. "They pay based on their usage, which includes the software, the hosting, the service-level agreement and the updates of the software – it's all in there."

Initially, the platform ran on the company's own hardware, but as **commercetools** expanded the company "reached a level where we had too many customers, too much traffic on our platform and we could not scale fast enough anymore".

**commercetools** began to look around for a partner. A priority was to find a company that offered flexible billing so that **commercetools** could guarantee service to its clients during times of high demand – but without having to pay for capacity not being used. In addition, **commercetools** wanted direct access to interfaces and tools to automate the process of managing peaks and troughs in demand. Finally, it was essential to find a company with data centres in Europe because of data-protection legislation.

**Rackspace**, was able to meet all these criteria. It's perhaps no coincidence that a commitment to finding smart ways to use the cloud is deeply embedded in the DNA of both organisations. "We try to use cloud services wherever we can," Dirk Hörig says, "we believe it's way better, we don't have the technical hassles. The whole company thinks cloud."

## CHOOSING A CLOUD PROVIDER

Once the decision is made to invest in the cloud, the next step is choosing a partner. There are three initial considerations here:

- Security: will the company's data be safe?
- Control: how much can the company exert?
- Reliability: bluntly, is something going to go wrong?

Security is usually the initial biggest worry for companies contemplating using cloud, a point that Nigel Beighton, chief technical officer, EMEA with **Rackspace** recognises. Nevertheless, he points out, "You've got security issues on any internet-facing application. What people tend to mean is they're thinking, 'Hold on a minute this is a shared environment, so there are potentially other customers, and I want to put up sensitive data. How am I going to do it?'" His answer is that best-practice approaches such as, for example, the use of encryption techniques tailored to the cloud are now well understood and established.

In terms of control and reliability, basic research should do much to allay fears here. What does the contract say? Assuming a retailer is working with a hybrid solution, carefully work through what this will mean when handling data. As for reliability, has the supplier had service outages? How well does the supplier cope with jumps in demand at times when this cuts across the entire sector, for example, around January sales?

## CULTURAL CONSIDERATIONS

If the initial questions around choosing a cloud provider appear, shall we say, cautious or even negative, there's a good reason for this. Despite the increasing use of the cloud by both the public and companies, there's still widespread suspicion that 'not owning' IT infrastructure is somehow inherently risky.

For this reason alone, it's worth squarely tackling issues around the cultural shift that switching to cloud entails. Nigel Beighton acknowledges the problem. "There's an emotional aspect where, with the old outsourcing model, you knew even if you'd outsourced a server where it physically sat because you'd seen the data centre, you knew the cabinet it was in, or you knew the serial number of that server," he says. "With cloud, people will invariably only know the country it's in, they don't know the data centre it's in, they can't come and see the data centre and it really is abstracted away from them."

Take a step back, though, and one way to view the cloud is as part of a wider shift in our society and economy, towards buying services rather than objects. Consider the growth of car clubs in Britain's cities. What could possibly be so good about having to share a car with others rather than jump in your own motor and driving off?

For a start, you're not taking the financial hit on the depreciation of the car's value. Moreover, you don't have to take it to the garage when it goes wrong or deal with the police and insurance companies if it gets stolen. The shift in thinking that underpins all this is from thinking a car is a great thing to own towards thinking of motoring and transport as a utility you buy and use when you need it.

There are other upsides here. It is far easier, for example, to justify spending cash on cabs or taking the train when you're not also paying such fixed costs as MOT, servicing and road tax. In addition, using cloud in smart ways will inevitably make companies, and individuals within businesses, think about different approaches to even familiar tasks. This cultural shift shouldn't be underestimated – and as we'll discuss later, there's a knock-on effect in terms of staff potentially needing to develop new skills – but that doesn't mean it needs to be feared.

*“It’s often this idea of being able to access capacity without having to own it that persuades companies finally to make the leap to the cloud”*

### THE COST FACTOR

If the idea of using cloud to help engineer a cultural shift within the company is a longer-term project, that’s not to overlook one of the key and immediate benefits the cloud offers: it’s often more cost effective. “The biggest, driving opportunity is cost saving,” says Rackspace’s Nigel Beighton, unequivocally. This is because the pricing model is typically on a pay-as-you-go basis. “At the end of the day what people are realising is that they don’t need all of their capacity, all of their servers for 24/7,” Beighton continues. “Part of their business will run 24/7, but a large portion of it, especially if you’re in retailing, is redundant for a large part of the year.”

It’s often this idea of being able to access capacity without having to own it that persuades companies finally to make the leap. “What retailers are looking to do is use cloud as the overspill, the overflow,” says Beighton. “Therefore, pay as you go is perfect for them because rather than buy four times the amount of capacity they need, which will maybe cost them hundreds of thousands, they’re spending only a few thousand in terms of spending only when they do need it.”

Before moving on, it’s worth noting that it’s still possible to get locked in with the cloud. Sign up for certain proprietary technologies and there could still be a nasty sting in the tail. However, adopting open standards from the outset can help alleviate issues around ‘lock-in’.

### THE CROSS-CHANNEL FACTOR

As we’ve already begun to explore, the idea of inexpensively being able to dial up extra capacity is a powerful incentive to use cloud within retail. The Christmas factor, or the seasonality of retail around key dates in the calendar, is a powerful driver here.

The idea of such peaks and troughs within the industry is well understood, but it’s worth pausing to look in more detail at cross-channel retail. It’s a term thrown around so often that, rather like the cloud, it’s become both over-used and used in subtly different ways by different people. So what exactly do we mean by cross-channel retail?

One way to think about this question is to focus on how retailers once talked about something called multichannel retail, which (rather frighteningly) was a cutting-edge idea as recently as five years ago. Multichannel retail was all about selling over multiple but essentially separate channels. In contrast, cross-channel emphasises the journeys that customers take towards purchases, journeys that might encompass mobile, social networks, the call centre, the web, the bricks-and-mortar store and internet-enabled television.

The emphasis is not on how different channels work in isolation, but how they work together. For this reason, it’s also been dubbed omnichannel retail, a term used in part to illustrate how customers don’t differentiate between different channels as retailers sometimes do, but consider themselves to be dealing with one company. It’s early days here as yet, but already it’s clear that effective cross-channel retail places a premium on tracking and analysing consumer behaviour.

What this means in practice is that cross-channel retailers have to deal not just with seasonal peaks, but peaks in demand for capacity based around the need to analyse data, to find out what customers are doing, a potentially costly task.

“The idea of analysing all of your customer base from things like loyalty cards has actually been an inordinately expensive thing,” says Nigel Beighton. “Cloud again has dramatically reduced the cost of doing that analysis and being able to look at all of your data trends. Whereas previously you would need an awful lot of infrastructure to do that kind of analysis effectively, especially to do that kind of analysis fast, the cloud has dramatically changed that. Rather than buying 200 servers to do the calculations that you need on large customer trends – to have that capacity and only ever use it once a month or a couple of times a month – with cloud you only pay when you do the calculation.”

### COMPUTER SAYS YES...

For the best cross-channel retailers, learning to analyse this data is only the first step. As retailers' ability to map cross-channel journeys becomes more and more sophisticated, a real challenge will be how to react. Already, there's evidence that savvy retailers see the potential of the cloud here.

Take the following scenario, which Nigel Beighton puts forward. The marketing department needs to put up a microsite because there's a TV campaign running over the weekend. Once, this kind of request would have provoked a desperate scramble to find the IT resources to support it. Today's chief technical officers can be far more sanguine.

"You basically go, 'That's fine we'll have it ready in a few minutes.' So having that in the back pocket takes the CTOs from being zero to hero," he says. "It suddenly allows them to be a saviour. Where previously it was, 'Computer says no,' cloud allows your CTO to say, 'Computer says yes.' And equally you're able to see the cost, control the cost quite easily, and pass that cost onto the department, so they understand the cost of what they're doing."

The need for this kind of immediate response is only going to increase in a truly cross-channel retail landscape. To look forward, imagine a time where a retailer not only knows that, say, a dress is trending within social media but that its core customers are among those most interested in the garment. Running a promotion to take advantage of this knowledge, perhaps offering a discount and cross-selling other items, makes perfect sense.

To return again to the potential power of cross-channel retailing, and this really isn't such a fanciful vision, we may see a future where retailers use cloud capacity to react to sudden surges of activity, and to react as near as possible in real-time.

*“ We may see a future where retailers use cloud capacity to react to sudden surges of activity, and to react as near as possible in real-time ”*

### IT AS THE NEW STRATEGIC ENABLER

To tie all these different strands together – the move from buying goods to buying services, the shift from multichannel to cross-channel, the idea of responding quickly to sudden peaks in demand driven by shifting patterns of consumer behaviour – it's fascinating to note how the idea of flexibility keeps reoccurring here, albeit viewed through different prisms.

In part, this is perhaps a reflection that retail, always a customer-centred business in theory, is becoming an even more customer-centred business in practice. In a world where consumers can instantly check prices – to the extent that Nicola Millard, futurologist with BT talks about a new generation of 'monster' customers who will, in store, wave around smartphones demanding discounts to match an online price they've just found – customer service is a powerful way for retailers to differentiate themselves from competitors.

It's a situation subtly echoed in the shifts that using the cloud can cause within organisations. All companies, for example, have (or should have...) IT specialists who relish the chance to poke around in the computer room, but cloud necessitates a move from being primarily hands-on technology managers to service managers. Suddenly, the emphasis is more on handling information flows, dialling up extra capacity when it's needed, understanding how cloud-based applications and interfaces work, rather than focusing wholly on the management and efficiency of infrastructure and software owned and operated by the company.

Seen in isolation, this may seem a small shift in emphasis, but it takes on far more significance when seen in conjunction with other people in the organisation finding their jobs are evolving in similar ways, as in the example of marketing and merchandising staff responding to fickle consumer behaviour. The need to be agile, always aware of what the customer needs, is suddenly at the centre of the company.

Coming at a time when cross-channel retail is already breaking down silos because it's no longer enough for the ecommerce team or the in-store merchandising team to work in glorious isolation, it may well be that deploying cloud-based methods of working will play a part in accelerating this process.



*“Using the cloud in cross-channel retail isn’t all about grand strategic visions. Many of its benefits are far more immediate and centred on operations”*

On a practical level, are key members of staff ready for such changes? Granted, the fully integrated cross-channel retailer offering seamless service across all its interlinked channels and touchpoints may not exist yet, but this is where the industry is headed. Accordingly, decision-makers need to prepare staff for this new landscape.

This may be a case of taking a step back from day-to-day tasks to look at how the cloud might help. This kind of time out may be necessary to make a harried IT manager reassess what they’re doing, or it may that a beleaguered CTO needs to explain to other parts of the business that, say, occasional outages with cloud-based technology need to be seen against problems caused by overstretched internal IT infrastructure.

It may also be worth pointing out that using the cloud and being able to engage with strategic issues is a lot more fun than worrying over whether a software patch will kill the web server or fending off denial-of-service attacks.

#### **OTHER BENEFITS**

Before we conclude, it’s worth emphasising that using the cloud in cross-channel retail isn’t all about grand strategic visions. Many of its benefits are far more immediate and centred on operations.

Take the worst-case scenario of disaster recovery (DR). “Before cloud came along this was always about having a secondary data centre, a second bunch of 400 servers, and there’s a huge cost to that,” says Rackspace’s Nigel Beighton. “So using cloud as part of your DR strategy in reality means you only pay for it when you use it. For retailers, it gives them an option with their applications to have a very cheap and easy DR policy. It makes a massive difference.”

Both from a customer perspective and from the perspective of staff, the cloud can lead to a smoother user experience. This is because applications are increasingly being designed that take advantage of horizontal scaling so that if a server starts to degrade, the application is designed to replicate itself across different servers. In this context, the cloud can help prevent website outages at times of high demand.

As to how companies should measure the effectiveness of cloud applications and services, the KPIs in many respects don’t vary so much from using ‘traditional’ IT. Cost, reliability and security will always be important.

However, it’s worth noting a couple of other, less obvious KPIs. Interconnectivity may become an issue if a company is going to use more than one cloud provider. To re-emphasise a point made earlier, the suitability of the cloud also needs to be considered for companies with legacy systems. The inherent scalability of the cloud is useless if, for example, a customised CRM system can’t cope with the cloud in the first place.

“Already, SMEs are using wholly cloud-based ecommerce solutions. This may become increasingly commonplace even among bigger companies”

## CONCLUSION

To return to where we began, these are, to use a Chinese curse, interesting times within retail. Some companies won't survive the switch to a cross-channel world. Both pureplays and longer-established brands will find themselves outflanked by a combination of monster customers, technological change and continuing economic uncertainty.

But it's not all bad news. New ideas associated with cross-channel – which range from 'virtual mirrors' that enable customers to 'try on' clothes digitally through to the emergence of ideas around 'emotionally intelligent' retail, where the emphasis is on using what retailers know about customers to talk to them rather than bombard them with offers – would appear to suggest there are clever people coming up with imaginative responses to this new paradigm.

As we've seen, the cloud will be integral to this new era. For proof, consider how a long-established, in cloud terms, company such as Salesforce has become an essential partner for so many companies. In the future, we can expect to see increasingly specialised, cloud-based offerings to reflect the new demands retailers will place on IT infrastructure and those selling applications. Already, SMEs are using wholly cloud-based ecommerce solutions. This may become increasingly commonplace even among bigger companies.

Currently, the central question that many companies are asking around cloud could be characterised as, 'Is it time we got involved here?' As a cloud 2.0 world comes of age, this will be replaced by another question: 'How can we do this using the cloud?'

## ABOUT RACKSPACE

Rackspace® Hosting (NYSE: RAX) is the open cloud company, delivering open technologies and powering more than 190,000 customers worldwide. Rackspace provides its renowned Fanatical Support® across a broad portfolio of IT products, including Public Cloud, Private Cloud, Hybrid Hosting and Dedicated Hosting. The company offers choice, flexibility and freedom from vendor lock in. Rackspace has been recognized by Bloomberg BusinessWeek as a Top 100 Performing Technology Company and is featured on Sunday Times list of 100 Best Companies to Work For. Rackspace was positioned in the Leaders Quadrant by Gartner Inc. in the “2011 Magic Quadrant for Managed Hosting.” Rackspace EMEA headquarters are in London with offices and data centers around the world. For more information, visit [www.rackspace.co.uk](http://www.rackspace.co.uk)



## ABOUT THE AUTHOR

Jonathan Wright is the co-editor of *Internet Retailing's* supplements, which look in depth at key issues in retail. His interest in disruptive digital technologies goes back to the turn of the millennium, when he was senior section editor of the influential new economy magazine, *Business 2.0*, and where his assignments included interviewing Sir Tim Berners-Lee, the father of the world wide web.

