

# Develop an intelligent disaster recovery solution with cloud technologies

*IBM experts share their insight on how cloud technologies can help restore IT operations more quickly, reliably and cost-effectively*



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## Overview

In this interview, IBM Business Continuity and Resiliency Services executives share their thoughts on today's server restoration challenges. They also discuss how cloud technologies and solutions such as IBM SmartCloud Virtualized Server Recovery can help organizations more quickly, reliably and cost effectively recover from a disaster or disruption.

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Increasingly, IT decision makers view cloud computing as an attractive technology for recovering servers after a disruption or disaster. They look to cloud-based Disaster Recovery as a Service (DRaaS) for its reliability, scalability and ability to dramatically reduce recovery point objectives (RPOs) and recovery time objectives (RTOs).

In this interview, IBM SmartCloud Virtualized Server Recovery (VSR) executives Man Bui, Ben Morehead and Warren Sirota discuss today's disaster recovery challenges and how cloud computing can help overcome them. They also share their insights on cloud's abilities to help recover IT operations more quickly, reliably and cost effectively.

## **Q: Why do you think cloud-based disaster recovery is so important to today's IT organizations?**

**Bui:** Cloud-based recovery makes it easier for organizations to get their data and applications back quickly, and that's what today's organizations really want. With VSR, they get these capabilities minus all the intermediary headaches they used to have to deal with—owning and maintaining the equipment, or making reconfiguration changes every time their production environment changes. With VSR, IBM does all that on behalf of the client, so the client is able to realize the true benefits of cloud based recovery: quick, reliable restoration of data and applications.



**Morehead:** On top of that, it makes workloads portable. With the cloud, you can take your workload and move it elsewhere if your data center goes down or your recovery center goes down.

### **Q: Can you explain the biggest problems traditional server recovery solutions present to organizations?**

**Bui:** One of the biggest headaches for traditional recovery—and therefore one of the biggest benefits that VSR gives organizations—is having a system image that is predictable for a failover. Typically an organization's disaster recovery group has problems keeping up with a production server's actual configuration because it is a different organization that is tasked with maintaining these servers. Often these two groups don't have close communications—they don't work hand in hand. People make changes to servers on a daily basis, whether at the operating system level, applications level or networking level, and those changes are not communicated to the disaster recovery team. So if an event happens, the disaster recovery people rebuild a system only to find out that they're rebuilding it to a year-old configuration, which is drastically different from what the production server is today. So when the applications come up, they look different. They don't install correctly. This causes longer downtime for the organization. VSR makes all of that go away because the system image on the IBM-managed server is consistent with the production image a few seconds before the crash.

**Morehead:** Another issue with the traditional approach is recovery to unlike hardware. If an organization has, say, Dell hardware and we're recovering to IBM hardware, sometimes there's a problem with moving data and

applications over to the recovery server. What virtualization and the cloud do is to abstract all the resources on the hardware so that they're generic. That's how VSR can help eliminate the significant recovery to unlike hardware problems that some organizations face.

**Bui:** Also, traditional recovery relies heavily on the human element—and there's a problem with that. Humans rarely do the same thing twice in exactly the same way. What I do on a Monday this month may be very different than what I do on a Thursday six months from now. VSR removes the human element. Every failover is scripted the same way. It's consistently very predictable and consistently very fast. And it gives the user the level of confidence he or she wants.

### **Q: What advantages does cloud-based disaster recovery have over a DIY approach?**

**Sirota:** If you really plan to do it yourself and you want to gain all the efficiencies and capabilities of a virtualized recovery solution, you've got a big project ahead of you. You need a recovery architecture. You need to engineer down to the specific level of particular machines. You need to build an interface. You need data center space. So you have this very long planning timeline then a long implementation timeline. You're probably looking at 12 to 24 months to get it all done. And then on top of all that you need to make the budget case. By going to IBM as your service provider, your solution is ready to go. You sit down. You plan out with the IBM architects what it is you need to protect. You can quickly get to a contract and have protection in a matter of weeks, not in a matter of 12 to 24 months.

**Bui:** Another problem is...in the last 10 to 15 years, we've had a lot of executive studies that show businesses saying, "Our core competency is manufacturing. Our core competency is pharmaceuticals. Our core competency is trading stocks. Our core competency is not IT." A lot of these organizations find it difficult to tackle the intricacies that make a disaster recovery plan successful. VSR really takes a lot of IT intricacy away from these organizations. And it gives the company the confidence to know that when your server goes down and you need that workload to run, when you need an application to magically appear to your end users, it will happen.

### **Q: What do you view as the primary benefits of IBM SmartCloud Virtualized Server Recovery?**

**Morehead:** VSR offers a number of key benefits over traditional recovery methods. First, there is very fast RPO. And we're talking usually under a minute for RPO. With onsite solutions, you could have an RPO as long as 24 hours. Second is the flexibility to manage your recovery from virtually any web terminal in the world. Which means your employees won't have to travel to a recovery site to keep your business running. This capability is extraordinary. You just don't get that with traditional recovery. The third benefit is scalability. IBM has a lot of resources. And if your server needs more resources, it's pretty easy for us to allocate that. In a fixed hardware contract, you just get what you contracted for.

**Sirota:** This type of speed and certainty has never been achievable before in trying to rebuild like-for-like systems. Restoring to unlike systems has been even more difficult.

**Bui:** If I had to pick the most important benefit of VSR, I'd say certainty. When an organization invests in any risk management solution, they're trying to buy certainty. With the VSR service, organizations can test failover as often as the IT manager or disaster recovery manager wants. If the client has very critical applications that are changing very rapidly, every time they make a change they can do an exercise on VSR to make sure that that new server image is successfully failed over. That gives them a feeling of certainty. Another point about certainty is when you buy VSR as a managed service; you know IBM is going to be there. You know the service is there 24x7.

### **Q: Does VSR have any specific benefits for small and midsize businesses?**

**Sirota:** The great thing for small and medium-sized businesses is that they can now buy into options that they didn't have the resources to create for themselves. Large users, enterprises with large IT shops, had the option to build recovery operations in-house because they have fairly significant staffs to architect, engineer and build out recovery solutions. That was probably beyond the means of a lot of small businesses, organizations with very small IT shops that are engaged in just running things day by day. So VSR opens new recovery opportunities to smaller and midsize businesses. Even if you have as few as five servers, you can benefit from VSR.

### **Q: Is there any type of organization that VSR is not appropriate for?**

**Morehead:** Some companies in regulated industries such as healthcare, pharmaceuticals, finance and insurance have requirements that mandate encryption of their data at rest.

Right now, that is difficult to support in public clouds. So while VSR does not provide encryption at rest out of the box, IBM does have the expertise and ability to provide private-cloud VSR deployments that meet that requirement.

**Sirota:** Exactly. IBM can sit down, take a look at what the organization's needs are in terms of protection and security levels, and develop a private cloud solution dedicated to that client. So that client will obtain all the benefits of VSR that we've been discussing, along with an extra layer of security.

### **Q: There are other cloud-based recovery solutions out there. What sets VSR apart?**

**Bui:** We offer tiered service levels. This is important. Tiering allows clients to pay less for the recovery of data and applications that have a higher tolerance for downtime. In traditional methods of disaster recovery, you basically have two choices. The first is a very fast, very high performance, very expensive solution such as mirroring or high availability clustering. That solution has great RPO but it's also very expensive. The second choice is falling back on something that's a lot more affordable, but you have RTOs in the two-to-three-day range and RPOs of a couple of hours at least, maybe even a day or two.

So in the past, many organizations had to say, "Well, we have lots of applications, but these three or four are so critical that we're going to have to put them on this expensive, highly available clustering solution. The rest go to the more affordable solution." It wasn't a rational decision. It was an economic decision. After protecting their three critical applications there wasn't much money left, so everything else went to a hot site. On the other hand, they may have had some applications that they over-engineered because there wasn't a middle solution. There were applications that could

perhaps tolerate an hour of downtime. But because there wasn't a one-hour recovery solution in the industry and hot site recovery took two to three days, they ended up putting applications with one-hour-tolerance into mirroring solutions by over-engineering them and overpaying for their recovery. Now VSR, with its tiered service levels, gives organizations a middle solution.

**Sirota:** Another thing is security. Not capital-S security, like data security, but the security of working with a provider who is not just there today, but who has been here for many, many years, has a lot of experience to bring to the table, and is going to be there for a long time to come. That's one of the most important reasons that organizations select IBM—not just for what we can provide today, but for the assurance of knowing that we are going to be there tomorrow and for the very long term. And our clients know that we will not just keep providing the current service, but keep enhancing it, growing it, and making it better.

**Morehead:** I would add that one reason you should buy from IBM is because we are big. Bigger is better in this case. We have more resources. VSR, for example, has been through two complete security audits. And we have remediated any tiny little flaws we have found in the security. The other reason is we're so big we have subject matter experts for just about every operating system out there. A smaller partner may not have that depth or breadth of expertise.

**Sirota:** IBM was an early leader in the virtualization movement with an offering called P2V, which stood for "Physical to Virtual recovery." We backed up physical assets into a virtualized environment. That eliminated many of the difficulties of recovering to unlike hardware. It was a huge success, and it pointed the way for us to develop full-blown

virtualized server solutions like VSR. We've led in the innovation of bringing virtualization and cloud to bear on the problems of recovery and resiliency. And by having led in that way we not only have a great service available for our clients, but we can offer all the experience our service delivery people gleaned from working with these solutions for years. It's real differentiator for VSR.

In our day-to-day lives, when we pick up the phone, we expect a dial tone. That's the kind of confidence that we have in our telephone company. We flip the switch, the light goes on. That's the level of confidence we have in our power company. VSR instills the same type of confidence in our clients. It's a managed service. It's all the people that we have 24x7 to keep VSR working, to the performance level that we designed it for. It is the years and millions of dollars that we invested in automating VSR, removing the human elements and errors that come with human involvement and making it predictably and consistently fast. That sense of certainty is the jewel of the service. It's the reason why people come to IBM.

### About the experts interviewed

**Man Bui** is Business Development Executive for the IBM SmartCloud Resilience disaster recovery business. In this role, he works with clients that want to introduce cloud-based resiliency into their disaster recovery plans. Bui has more than 25 years of experience at IBM in engineering, sales and marketing.

**Ben Morehead** is the Chief Technologist for IBM's cloud-based disaster recovery offerings. In that capacity, he manages quality assurance and technical validation of disaster recovery services. Morehead has been with IBM for 10 years and has worked extensively on technical integration, including in cases of mergers and acquisitions.

**Warren Sirota** is the Global Offering Executive for IBM's traditional and cloud-based disaster recovery businesses. He has experience working with a wide range of clients on disaster recovery planning. Sirota has also been an integral part of the IBM Emergency Response Team, helping clients recover from disasters in the United States. He has 16 years of experience at IBM in Global Technology Services product management and development.

## For more information

Want to learn more about cloud-based disaster recovery?

Read our [case for cloud-based disaster recovery](#) and our [white paper, Virtualizing disaster recovery using cloud computing](#).

For more information, call 1-800 IBM-7080 or visit the following website:

[ibm.com/services/continuity](http://ibm.com/services/continuity)



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