SimplePay

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SOLUTIONS GROUP

SimplePay group selects Riverbed as its software-defined networking partner to scale its business globally

When Australian start-up SimplePay decided to take its payment processing service global, the first priority was to replace its existing bespoke networking infrastructure with one that would deliver the security and reliability the company needed to scale its agile business. Riverbed SteelConnect for Amazon Web Services (AWS) enabled SimplePay to deliver its service to new sites quickly, securely and cost-efficiently, paving the way for future growth.

Challenge: Business growth hampered by legacy networks

SimplePay opened its doors in Sydney in 2012, quickly establishing itself as a leading payment processing company in Australia. The company's core value proposition is its market-leading ability to securely process large volumes of transactions across markets and currencies on a single platform. SimplePay solutions address data integrity, privacy and security policies and cover more payment methods than any other provider.

As the company expanded to serve new customers across a range of industries and geographies, its existing IT systems and networking infrastructure could not keep up with the growing needs of a fast-growing, increasingly distributed operation. With target customers in Europe and the Middle

East, new business opportunities in the UK and with planned expansion to the US, Rob Gillan, SimplePay's Chief Technology Officer, knew he needed to replace the legacy infrastructure with a technology platform that would better support future growth and scaleability. Because SimplePay is an agile organization and automates many elements of its business, Gillan was looking specifically for a solution that would be easy to manage and wouldn't require the addition of new IT headcount.

"When I joined the organisation in early 2016, there was a whole range of applications and bespoke build in place that was solving short-term problems–we were still operating in start-up mode," says Gillan. "The systems were working fine for us locally in Australia, but I recognised early on that they couldn't be easily scaled across the globe or easily managed from a reliability and sustainability perspective. We didn't want to have to drop IT staff in to every new location."

In order to drive its unique offering into global markets, SimplePay needed to deploy application servers close to where its customers were, and to build a core infrastructure it could "set and forget," while at the same time provide the security and availability customers demand.

"Payment processing is a secure business. Every packet of data is carrying revenue, so it's something we had to very quickly focus on, and get an agile, secure architecture."

In Brief

Challenges

- Inability to scale the business efficiently, securely and cost-effectively with existing bespoke network infrastructure

- Business agility hampered by complex network management

- Deficient network security and reliability for supporting global growth

Solution

- Riverbed SteelConnect for Amazon Web Services (AWS)

Benefits

- Ability to design and deploy a reliable, secure software-defined wide area network (SD-WAN) across the globe at a low cost

- Reduced time to provision new sites from months to minutes, improving business agility

- "Set and forget" SD-WAN infrastructure reduces CAPEX as well as the need for additional IT headcount

- Simplified cloud network management through a single pane of glass (SteelConnect Manager)

Solution: SD-WAN for the cloud era via Riverbed SteelConnect for AWS

Facing the challenge of quickly rolling out a global application and network infrastructure, SimplePay decided to partner with global cloud operator Amazon Web Services (AWS). This gave IT staff the ability to spin-up infrastructure in regional clouds wherever required, and the ability to manage that infrastructure through a single pane of glass.

Then, within the AWS secure environment, SimplePay deployed Riverbed SteelConnect, a revolutionary SD-WAN solution that automates cloud connectivity for hybrid cloud environments. SteelConnect supplies the internal backbone connection between all of the virtual clouds SimplePay runs in AWS and provides a consistent and secure connection anywhere in the world. "We don't have to worry about security or reliability; we now have a fully encrypted backbone that we've deployed using Riverbed at on- and off-ramp points," says Gillan. He uses Riverbed SteelConnect management console, which means that sitting at his desk, he can turn on AWS anywhere in the world, provision it, and 10 minutes later the network is connected.

"There's no truck roll, there's no staff needed, it literally is one of the simplest deployments I've ever been involved in," said Gillan.

Unlike traditional switching and routing solutions that rely on physical boxes, Riverbed's application-defined SD-WAN is easy to deploy and reliable. SimplePay runs private network addressing between all of its sites, and can easily talk to a server in the UK, Singapore or Australia just by typing a private IP address. SteelConnect scales so that if higher bandwidths are required, the software can be deployed on a bigger AWS instance.

According to Gillan, most of Australia's local councils total between 10,000 and 20,000 parking meter transactions each day, a scale that doesn't use one percent of SimplePay's infrastructure capacity, which was built to scale to a thousand transactions a second around the globe.

Benefits: Optimum performance, lower costs, greater scalability

With the Riverbed/AWS solution, SimplePay doesn't own any of its infrastructure, which removes significant capital and depreciation costs. Other benefits include the ability to automatically scale and deploy quickly if additional infrastructure, larger servers or greater bandwidth are required. Planning and deployment times are reduced and in some cases eliminated altogether.

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There is no need to contract data centre providers in each region, lease servers, deploy routing hardware, build firewalls or manage assets. As the business goes up in one country it can scale up, saving time which would otherwise have been used waiting for those capabilities to be made available.

According to Gillan, the time taken to plan, build and deploy a global network has dropped from months to hours. He can turn on a new country in 15 to 20 minutes and recently had a customer initiate a trial of SimplePay's service two weeks after the first sales meeting, which previously would have taken two to three months. "That's literally unheard of in this industry," he said.

"It's interesting if you look back two of three years, if you were going to build a global database and application servers, you'd be contracting a data centre provider or a space provider somewhere and leasing the servers and deploying your own routing hardware and having to build your own firewalls and having to manage all those physical assets," explained Gillan.

"We've been able with AWS and Riverbed to not have any infrastructure that we own from an asset perspective. Other than all the financial benefits of now having an operational cost rather than capital that we need to depreciate and manage from the financial perspective, we've got an ability now to very quickly build and deploy a global network which would have taken months of planning and deployment before, now in hours.

"If the sales guys get traction in France tomorrow," he continued, "we'd be deployed before Monday. It's literally that simple. It's an environment that is almost unheard of—unmatched. When you see it work, you just don't believe it."

Instant scale is another huge benefit. "One of the other less obvious benefits of solutions that are fundamentally software-based or cloud-based is the automatic scaling," says Gillan. "It's not just the fact that we can deploy it quickly if we need more infrastructure or we need larger servers or more bandwidth between points. We get on a webpage and dial it in. There's no planning or deployment needed. We can scale up and down with both Riverbed and AWS without any concern. And we get what we pay for so we don't get stranded hardware or stranded networks; we literally have an automated solution we can dial up what we need and it's on demand. So as the business ramps up in one country we can scale it up, if it ramps up somewhere else we can scale it up there, we're not sitting and waiting, and those capabilities are absolutely incredible from a production perspective."

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Another benefit is in the solution design. The Riverbed SteelConnect appliance allows SimplePay to interconnect virtual private clouds within AWS, so that it can connect regions to each other to support seamless processing and offer fail-over options. SimplePay can now deploy redundant infrastructure in different data centres all over the world, which then act to protect each other.

For example, if SimplePay lost Sydney or Ireland or any region, the other sites automatically pick up the load. This gives SimplePay a failsafe system built on commodity components: "If you were trying to build it yourself, it would take a significant amount of development and operation expertise, and the Riverbed / AWS combination gives that to us."

With services running in the UK, UAE, and Australia, SimplePay also takes advantage of time zone differences, with transactions following the sun. "We could scale this to thousands of transactions a minute without even having any blip on the infrastructure, or any more cost.

It's globally replicated, so as soon as a transaction happens anywhere in the world, it's automatically replicated into three sites. We're now in the process of deploying another triple redundant cluster in the US for North American traffic and again I haven't had to leave my desk. The organisation knows that there's no geographical limits to where they can sell services."

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