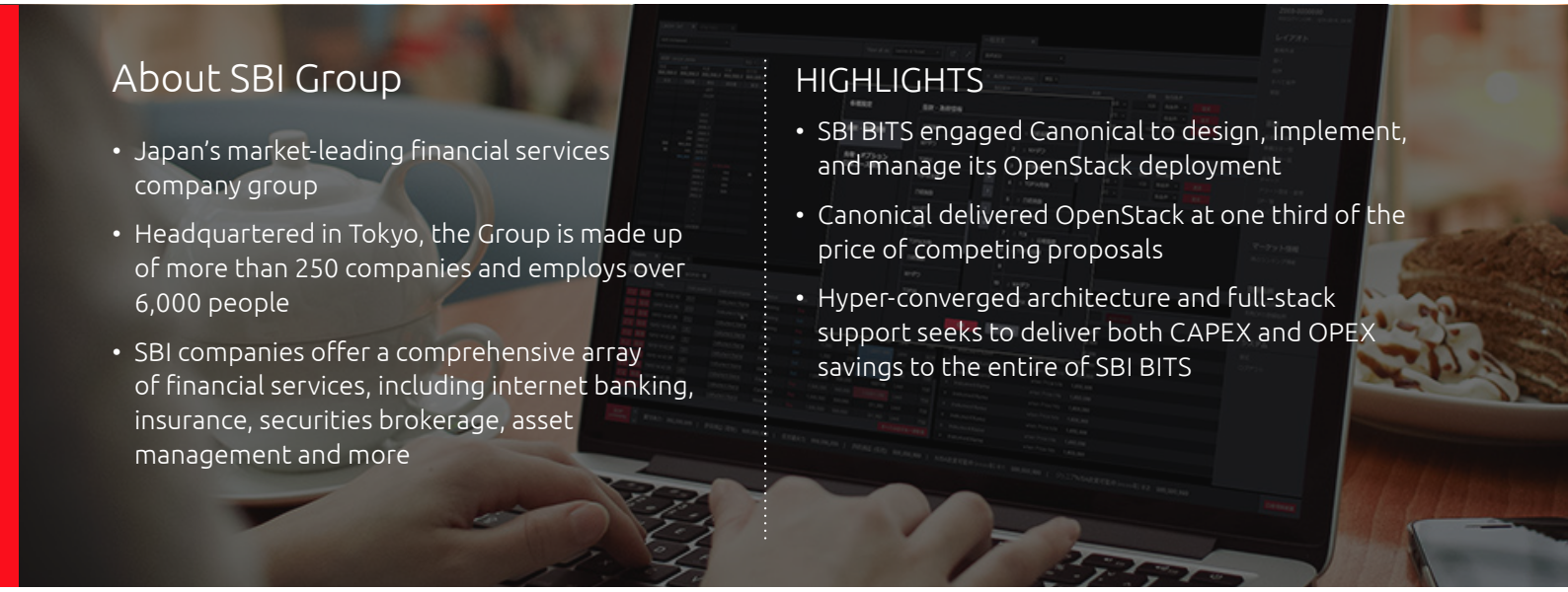
CANONICAL

SBI Group unlocks infrastructure automation with secure, on-premises OpenStack cloud



About SBI Group

- Japan's market-leading financial services company group
- Headquartered in Tokyo, the Group is made up of more than 250 companies and employs over 6,000 people
- SBI companies offer a comprehensive array of financial services, including internet banking, insurance, securities brokerage, asset management and more

HIGHLIGHTS

- SBI BITS engaged Canonical to design, implement, and manage its OpenStack deployment
- Canonical delivered OpenStack at one third of the price of competing proposals
- Hyper-converged architecture and full-stack support seeks to deliver both CAPEX and OPEX savings to the entire of SBI BITS

SBI

SBI BITS provides IT services and infrastructure to SBI Group companies and affiliates – and with such heavy demand, SBI BITS was seeking alternative solutions beyond bare metal servers to meet client requirements and time to market urgency.

Looking for a way to more quickly deliver services and resources to the rest of the Group, SBI BITS explored multiple solutions and finally decided on OpenStack. A combination of expertise, value, and open source flexibility made Canonical the ideal choice for implementing and supporting the technology. Today, SBI BITS is enjoying unprecedented automation and cost savings, and it is poised to extend its OpenStack offering to the entire SBI Group.

> "There was no risk of lock-in with Canonical's OpenStack. It's close to the upstream version, so we have the freedom to fully support internally, if we want to."
>
> Georgi Georgiev – CIO, SBI BITS

The challenge

With hundreds of affiliate companies relying on it for IT services, SBI BITS – the FinTech arm of SBI Group – is under immense pressure to make its infrastructure available simultaneously to numerous internal clients, often with critically short time to market requirements.

Georgi Georgiev, CIO of SBI BITS, elaborates: "With the Group's IT needs constantly increasing, provisioning compute, storage, and networking resources quickly was becoming a challenge for us. We were managing to keep up with demand by operating a particularly large pool of hardware resources, but meeting tight deadlines was stressful at times given that deployments weren't completely automated."

At the time, SBI BITS was using traditional virtualisation. The company knew that in order to truly streamline infrastructure delivery and achieve automated, on-demand resource provisioning, it needed to eventually transition to cloud computing.

"Public cloud was never an option," explains Georgi. "Operating in the highly regulated financial services industry, we need complete control over our data. If our infrastructure isn't on-premise, it makes regulatory compliance far more complicated."

OpenStack emerged as the perfect solution. It would enable SBI BITS to build its own private cloud on its own hardware, gaining all of the benefits of cloud computing without having to entrust its data to a third party.

Georgi continues: "We experimented with OpenStack in-house, but we wanted expert support before deploying in production."

> "Canonical's solution was a third of the price of the other proposals we'd received. But it wasn't just about cost. Canonical's engineers visited us in person, and that gave us confidence in the people that would be behind the OpenStack deployment."
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> Georgi Georgiev – CIO, SBI BITS

The solution

SBI BITS turned first to its existing technology partners, but their proposals for deploying and supporting OpenStack were far too costly. Additionally, the solutions would have led to unavoidable vendor lock-in. In contrast, Canonical offered a cost-effective and flexible option that aligned with SBI BITS' open source philosophy.

"Canonical's solution was a third of the price of the other proposals we'd received," recalls Georgi. "But it wasn't just about cost. Canonical visited us in person, and that gave us confidence in the people that would be behind the OpenStack deployment – we knew that Canonical had the knowledge."

"What's more, there was no risk of lock-in. Canonical's OpenStack is close to the upstream version, which meant we would always be able to get the latest updates in a timely manner, and we would have the freedom to fully support internally. That's not necessarily something we want to do, but it's important to have the option. We use a lot of open source technology internally, so Canonical's culture of being open and close to the upstream really appealed to us."

SBI BITS was keen to explore Kubernetes once the OpenStack deployment was complete. The company did not have the right internal expertise to manage Kubernetes in-house, so Canonical offered to bundle Kubernetes support alongside OpenStack.

Canonical designed and built the initial OpenStack deployment within a few weeks, and is now providing ongoing maintenance through the Ubuntu Advantage for Infrastructure enterprise support package. The initial implementation comprised of 73 nodes each at two sites, deployed as hyper-converged infrastructure and running Ubuntu 18.04. This architecture enables a software-defined approach that unlocks greater automation and more efficient resource utilisation, leading to significant cost savings.

Additionally, Canonical utilised Ceph to deliver 300TB of optimised storage at each site. Ceph is an open source, distributed storage platform that brings together object, block, and file storage into a single, fault-tolerant system – which is ideal for enterprises like SBI that require a range of different data access methods.

SBI BITS is also taking advantage of Canonical's Juju and MAAS tooling. MAAS enables automated, self-service provisioning for the organisation's bare metal servers, while Juju functions as an application modelling tool that streamlines the deployment, configuration, and operation of complex software.

The results

- Canonical's OpenStack deployment took just a few weeks
- Automation eliminates the majority of physical work involved in resource provisioning
- On-premises solution simplifies regulatory compliance both CAPEX and OPEX savings to the entire of SBI BITS

SBI BITS' first OpenStack deployment is already yielding a wide range of benefits. First and foremost, the private cloud has streamlined the infrastructure delivery, ensuring that the company can meet the IT needs of SBI Group without the stress.

"We can now do everything through OpenStack," confirms Georgi. "In the past, we had to worry about tedious and time-consuming physical work such as pulling cables. But now, most things can be accomplished in a short amount of time as it is just a matter of configuration. For deployments that don't need to integrate with systems in our existing data centres, there's literally nothing for us to do physically."

The solution is also proving to be highly cost-effective, both from CAPEX and OPEX perspectives. Since OpenStack is using the hardware more efficiently, the upfront investment was very reasonable. At the same time, Ubuntu Advantage for Infrastructure takes all the complexity out of maintenance and troubleshooting – resulting in lower operating costs and empowering the internal team to focus on the core business.

"And we still have total control over our environment," adds Georgi. "Explaining to regulators will be easy. When we tell them that all our data is hosted internally, a lot of their concerns go away."

Soon, OpenStack will be used across the entirety of SBI Group. The next step will be implementing Kubernetes, which – with Canonical's support – SBI BITS intends to deliver to the rest of the Group as a managed service.

"Our whole interaction with Canonical has been a very pleasant experience," concludes Georgi. "Thanks to their solution, we now have a stable environment with enough automation that provisioning resources is no longer a cumbersome process."

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