



How to Simplify Data Protection Within Your Organization

Skyhigh Security's Nate Brady on Simplifying Architecture With SSE and SASE



Nate Brady

As an enterprise architect, Brady serves as a trusted adviser and advocate for Skyhigh Security customers and has helped them navigate many pivotal transformations over the past two decades. He serves on the executive board for the (ISC)² Chicago Chapter.

Most enterprises today are rich in data, including customer information, financial data, intellectual property, trade secrets, employee data and more. With a single click, employees or hackers can send this valuable data outside of the organization.

Over the years, most organizations have acquired multiple tools for protecting data, including data loss prevention, web gateways and cloud access security brokers. But these tools are managed by a variety of personnel and policies, making it difficult to manage data within an organization. In the third installment of this podcast series by Skyhigh Security on data protection, **Nate Brady**, enterprise architect at Skyhigh Security, shared why organizations need to look for new solutions.

“Each of these products is going to work a little differently, and it ends up being a confusing situation for employees because they don’t know what’s allowed and what isn’t because the policy often is inconsistent,” Brady said. “It’s a lot of point solutions all over the place.”

When it comes time to refresh these tools, Brady said, organizations should look into the latest security service edge and secure access service edge solutions because “it’s in our best interest to simplify things and reduce the probability that we’re going to make an error.”

In this podcast with Information Security Media Group, Brady discussed:

- What organizations need to protect and why they need to protect it;
- How to simplify data protection with SSE;
- How organizations are using SSE to protect enterprise data.

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Different Types of Data

CAL HARRISON: When it comes to enterprise data, what do organizations need to protect, and where do they need to protect it?

NATE BRADY: Every organization today is data-driven. We use data intensively to understand what our customers want to buy, how to market to them, how to run our operations efficiently and how to keep our prices down. We use it for budgeting, hiring, inventory and supply chain. People say data is the new oil, but it's not oil in the ground. Data is like oil in a car. It keeps everything running smoothly and efficiently. To do that, companies have lots of different types of data. Usually we think about PII and PCI, but there are other types too.

One is trade secrets. Every company has some secret sauce that gives it an advantage over its competitors. This might be about the manufacturing processes, or it could be source code, formulas for a drug or supply chain processes. It's something that an organization does a little bit better than its competitors that gives it an advantage. You also have market data – demographics and who's buying what, buying trends and supply chain intelligence.

These allow your company to make good business decisions.

There is also financial data. If you're a public company, you have things that you have to keep secret: income and expenditures, profit and loss, earnings per share, and your employees' names, addresses, ID numbers, salary and benefits. The dark web would love to have that data and would pay dearly for it. Lastly, there is customer data. This is arguably the most important thing. Our customers trust us with their data so that we can do business with them. It includes their name, address, purchase history, payment information and other sensitive data.

There are a lot of different types of data that we've got to protect, and it is all over the place. The way we protect it is new. We used to have some people in-house, a database or some software. Some of it may have even been homegrown. But now people are using software as a service, and it is driving some of the data outside of the company, making it less under our control. Our data is everywhere, but no matter where it is, we have every reason to protect it.

Why Protect Data?

HARRISON: We hear about data breaches all the time, and a lot of the different data sets you listed are prime targets. Why do organizations need to worry about protecting data these days?

BRADY: It's the right thing to do, especially when it's other people's data. Losing any type of data can be painful and expensive. You can have a range of consequences. First, you can lose the trust of your employees or your customers. They expect us to protect that data, and if we don't, we can lose them. You can also lose a competitive advantage. If your secret sauce – how you do something or make something work – gets out there, that could be the end of your company.

There are governments and self-regulatory bodies – like PCI, for example – that expect us to have rules. If we want to accept credit cards, for example, there are rules, and if we don't follow them, a whole slew of bad things can happen to us. It starts with fines, penalties and lawsuits and goes on to criminal investigations. If you lose employee data, your employees might be upset with you and leave. Then you would have to attract new people and retain good talent. If you lose customer data, in addition to fines, penalties and lawsuits, the good will of your company would be lost, and your customers might go someplace else. There are a lot of reasons to protect all of this data, not necessarily just the reason why the government says we have to.

Data Protection Challenges

HARRISON: How are organizations addressing these issues today?

BRADY: When organizations first started putting in email DLP or network DLP, and we started getting onto the web, we installed web DLP, and sometimes it got integrated into our web gateways. We focused on the endpoint. When people started taking laptops home, we didn't want them to transfer stuff to a USB stick and drop it in a parking lot. Then, there is cloud DLP, where my data is not passing through a perimeter at all. It's in the cloud. I right-click on it and say "share," and then it goes. It doesn't go over any technology that I can do inline. I'd need a CASB.

The situation has evolved almost like a point solution. We wind up with three to five technologies that we've accumulated over the years that do the same thing in different parts of the IT infrastructure. Often, these are managed by employees that have completely different reporting infrastructures. Email manages their own, web manages their own, and there might be a DLP team managing the endpoint. That means we have to define what our sensitive data looks like and where it is in three or five different places, and each of the products works a little differently. It ends up being confusing for employees. They don't know what's allowed and what isn't because the policy often is inconsistent. There are a lot of point solutions all over the place.



Simplifying Data Protection

HARRISON: What you've described is pretty complex. What can we do to simplify things?

BRADY: It is definitely complex, and complexity leads to higher costs and more opportunity for error. But it's really important to protect this stuff, and we can't use the excuse that it's hard to do. So, it's in our best interest to simplify things to reduce the probability that we're going to make an error. When each of the existing products was implemented, the decision to purchase it was tactical. Someone saw a problem that had to be solved.

Now, data protection is more of a boardroom concept. It's an organizational strategy. Sometimes, there is a C-level officer in charge of security and data protection. So, the first step in simplifying things is to have an organizationwide, plain-language policy for data

protection: What type of data do we have to protect, and why does it need to be protected? Who can use the data, and what are the rules for using and storing it? Once you have this policy, the different groups can take a fresh look at their control matrices and tooling to see where there are opportunities to consolidate.

Consolidating and reducing the number of tools will help us reduce complexity and the chance that we're going to make a mistake and something is going to slip through. Over the past few years, vendors have been consolidating. You used to have email DLP vendors, web, cloud, etc. Now we have a few vendors that do all of them. In recognition of this, Gartner collapsed its market segments. Web gateway and CASB used to be separate and each had its own Magic Quadrant, but Gartner has collapsed them into something called the security service edge or SSE.

Moving to Security Service Edge

HARRISON: A lot of organizations out there have separate DLP technologies today. How can they move from this environment to SSE?

BRADY: The first challenge is organizational and involves the decision-making process within a company. If different departments make their own rules for what data needs to be protected, that precludes having a platform approach and boxes you into a point solution. So, look at your decision-making process for how data needs to be protected.

Also look at the buying process because if every team makes its own decisions on what tools it's going to buy, you can end up with more tools and more complexity than the organization needs. And there are less complex solutions that would save you money. For example, the next time the web gateway is up for a refresh, don't just go out and buy a web gateway. Look at the broader needs of the organization, and see if you can find an SSE solution that not only meets the web gateway requirements of today but also satisfies the future needs for email, cloud and endpoint.

HARRISON: Can you give any examples of how organizations are making this transition?

BRADY: As a member of the (ISC)² board for Chicago, I talk to lots of architects and CISOs, and everybody's trying to tackle this. It is a slow process, but the ones that are having the most success have a high-level strategy and make product decisions at a higher level than they used to. I know of a healthcare organization and an energy company in this situation, and the U.S. Department of Defense is consolidating how it protects different armed branches, which are all protecting the same state secrets.



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‘Look at the Future’

HARRISON: Different organizations are on different steps in the journey. What are your recommendations for organizations that are just getting started with DLP?

BRADY: If you’re just getting started, the good news is that you can bypass a lot of the pain that the rest of us have gone through. If you’re looking at DLP, resist the urge to solve for the elephant in the room without considering all of the monkeys, because once the elephant’s gone, those monkeys are going to destroy the place. Often, this happens with things like Office 365. A lot of customers want to solve the Office 365 problem. I ask them, “Do you have other apps?” And they say, “Yes, but we’ll deal with that problem later.” If you do that, you box yourself into a place where you have several different data protection products and lots of complexity, because there are ways to solve Office 365 that only work for Office 365.

My advice is: Whether you’re new to data protection or you’re a veteran, take a step back and understand what your company needs from a strategic data protection perspective. Then make your tooling choices and your product purchases based on that rather than on what happens to be up for refresh or the thing you’re trying to buy today. Look at the future.



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