



**Slalom Consulting
Advances Cloud Maturity
with AWS
September 2014**

SLALOM
CONSULTING

Abstract

The cloud is often painted as a revolutionary technology, but the truth is that an evolutionary strategy is often the best approach to technological change. Slalom Consulting was an early adopter of cloud services, yet they pursued a gradual, step-by-step cloud migration model as they matured from managed services to self-managed hosting on AWS. At each point, they made decisions in light of their business goals instead of received wisdom. As their needs changed, they were not afraid to evaluate new models and new providers, always prioritizing tangible business value rather than simply following the crowd.

Ultimately, they chose Amazon Web Services (AWS) for their infrastructure-as-a-service (IaaS) needs, enabling them to achieve targeted levels of cost-effectiveness, performance, security, and control. This paper will detail their evolution to a mature cloud strategy, how they came to choose AWS as their IaaS provider, and the details of the migration process. It also provides a narrative of a company using business logic to make technical decisions, leading to a highly capable and cost-effective cloud solution.

Slalom cloud adoption prior to AWS

Founded in Seattle, Washington in 2001, Slalom provides a wide variety of business and IT consulting services to some of the world's most innovative companies. In contrast to the traditional high-pressure consulting firm environment, Slalom has consistently cultivated a balanced, collegial atmosphere that minimizes turnover and enables consultants to do their best work. Because of this approach, the company has built an international team of experts and a peerless reputation that together drive annual revenue of nearly \$500 million.

To maintain this position and drive growth, Slalom must stay on the leading edge of technology for two reasons. First, they must maximize IT and operational efficiency internally to remain competitive and agile. Second, they must be able to advise their clients on the most effective and capable technology solutions available, and there is no better way to do this than to deploy those solutions internally.

With these goals in mind, Slalom made their first major move to cloud services in 2008, migrating their email infrastructure from an on-premises Exchange Server to a hosted Exchange service with Microsoft's Business Productivity Online Suite (BPOS). The move cut costs, improved availability, and reduced the management and support burden on Slalom IT staff. Emboldened by the success of this initial effort they moved almost all of their business applications and IT services to the cloud over the next several years, using IaaS delivered by a local provider.

The move to an IaaS model simplified management, reduced costs, and increased scalability for Slalom. However, over time they began to encounter significant problems with their cloud provider including:

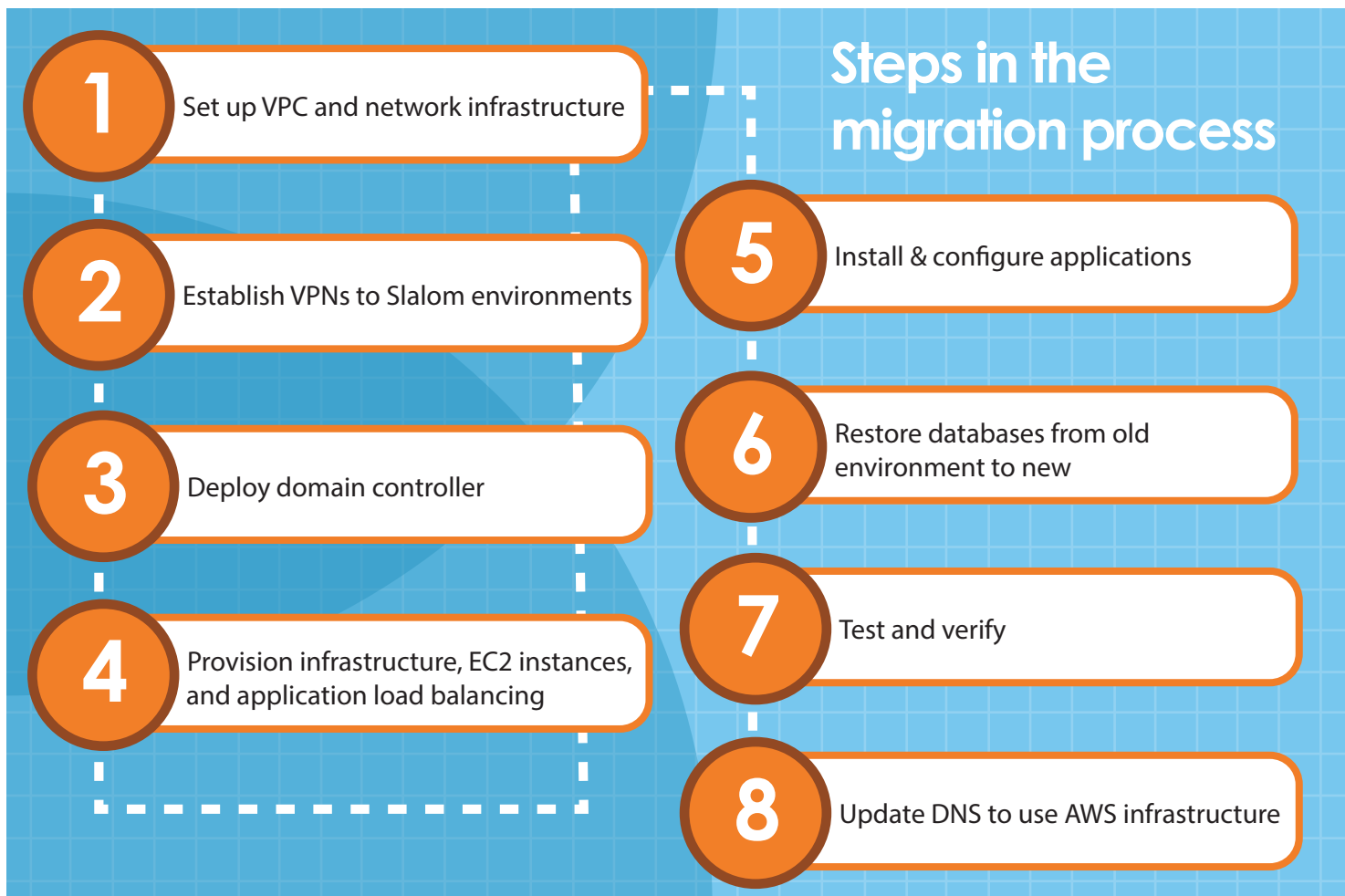
- Availability issues: Multiple unplanned outages had a significant impact on Slalom's day-to-day business activities. In the fast-paced world of business and IT consulting, they simply could not afford downtime.
- High costs: After performing a cost analysis, Slalom realized that moving their Microsoft SharePoint infrastructure to AWS could cut their costs in half.
- Account management: The cloud provider did not provide a dedicated account team and Slalom had difficulty getting the level of service they needed.

Why Slalom chose AWS

In keeping with their desire to maintain a technology leadership position, Slalom had been evaluating other cloud hosting options for many months before settling on AWS. Their requirements for the new provider included:

- **High availability:** Slalom wanted to reduce or eliminate unplanned outages and ensure that availability would remain consistent as their business grew.
- **Performance:** Slalom sought best-of-breed cloud services to ensure that consultants would have the speed and responsiveness they needed to be empowered rather than limited by cloud technology. The company also wanted to ensure that they could smoothly migrate large data sets easily.
- **Scalability:** As a rapidly growing organization with international expansion plans, Slalom needed to know that their cloud provider could scale to meet not only their present needs, but accommodate all future growth. Slalom also needed a partner with global reach to support its international expansion plans.
- **Security:** Because Slalom deals with clients' business-critical intellectual property, enterprise-grade security was a must-have.
- **Partnership:** Slalom sought a company with whom it could partner to deliver customer solutions on the same platform after gaining expertise with their own deployment.

Steps in the migration process



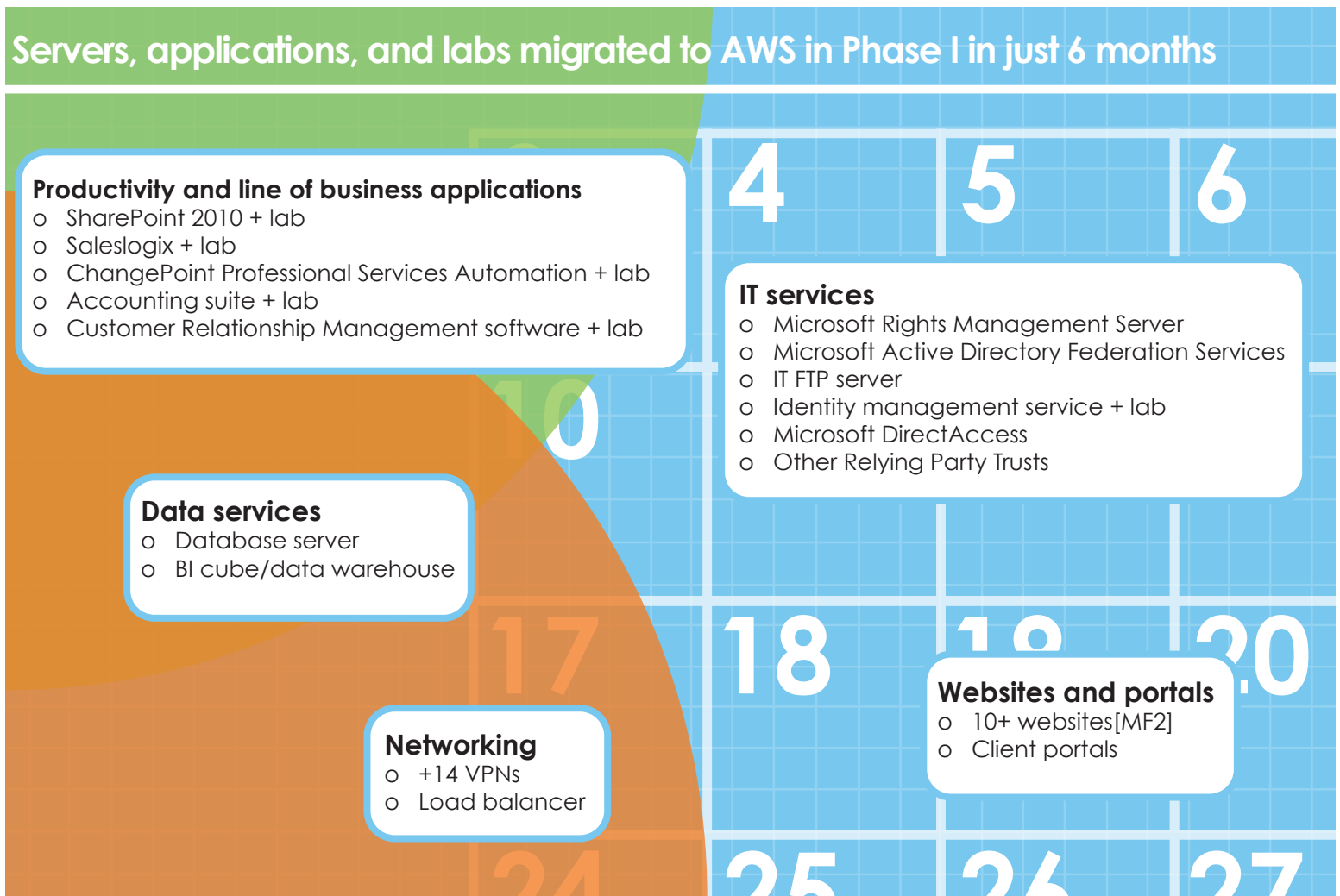
Smart migration reaps additional benefits

The first business application Slalom moved to AWS was Microsoft SharePoint, which was completed in December of 2013. The results were impressive, with an immediate 50% cost savings on hosting and the elimination of unplanned outages. Initially, the team planned to use AWS for new applications and migrate existing applications to AWS only when upgrading. However, after further problems with their former IaaS provider, the Slalom team decided to proactively move all production servers and labs to AWS.

Slalom decided to pursue a phased migration process. Phase 1 involved migrating more than a dozen production systems and corresponding lab environments. It took approximately six months to complete. Phase 2 will complete the migration of secondary lab environments, which is anticipated to take another six months.

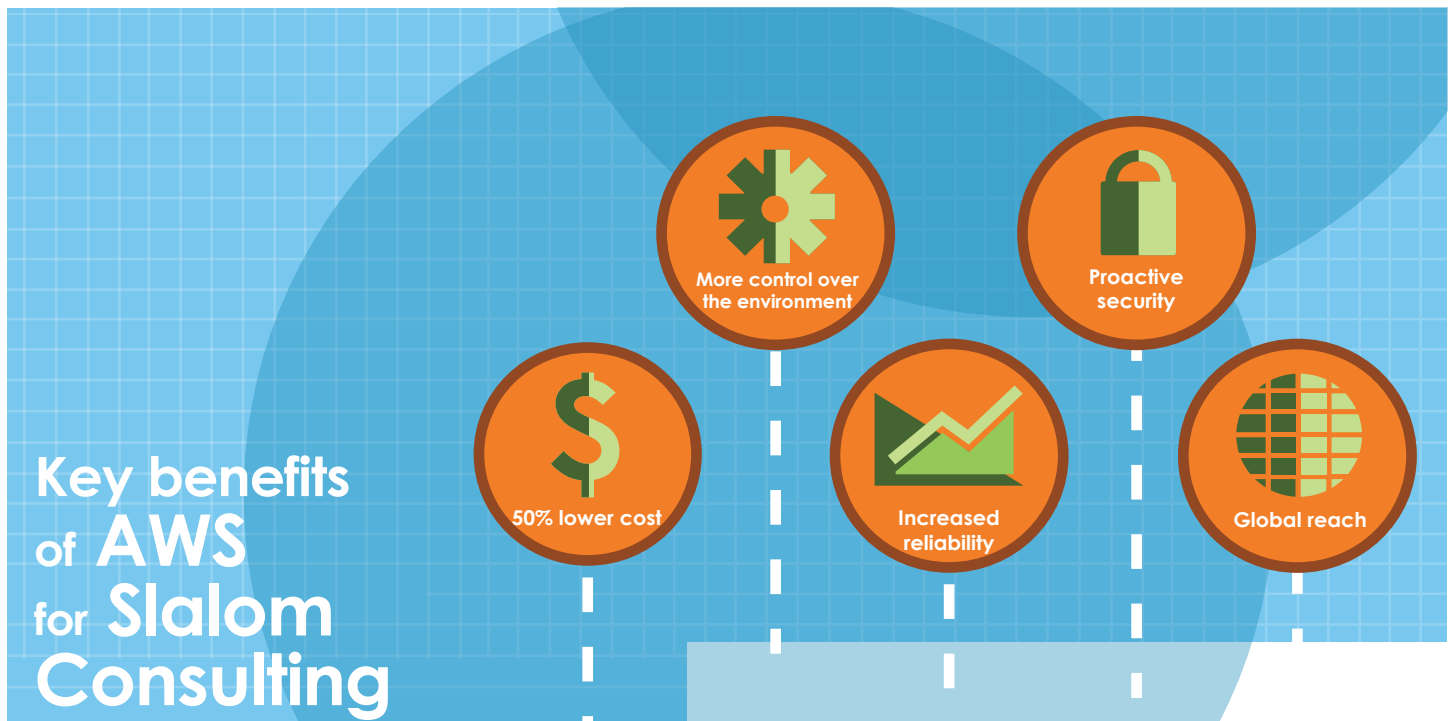
While it is possible to copy and migrate an existing VM directly into AWS, Slalom decided that this approach would make troubleshooting and configuration more difficult. Instead, they chose to stand up new infrastructure in AWS, freshly install and configure applications, and then restore databases to the new instances. This allowed the Slalom IT team to upgrade and optimize operating systems and applications under a rapid timeline with many dependencies. Employees experienced no downtime in the switchover to AWS. Slalom also took advantage of fast storage available in AWS. While they use elastic block storage for their databases, they configured SQL Server to utilize tempDBs on local, temporary SSD-backed drives.

Servers, applications, and labs migrated to AWS in Phase I in just 6 months



Benefits of moving to AWS

- **Reduced costs:** Compared to their previous hosting provider, Slalom saved a significant amount of money. Hosting SharePoint 2013, for example, cost Slalom 50% to 60% less per month with AWS. Additionally, AWS does not charge for incoming data—a cost savings that will continue to add up over time
- **Improved availability:** Since migrating to AWS, Slalom has not experienced any unplanned outages.
- **Better performance:** Consultants have a more responsive experience on SharePoint and business intelligence tools thanks to the optimizations Slalom was able to make during the migration. Slalom anticipates that they will be able to maximize performance for international offices by locating instances in AWS datacenters with closer geographical proximity.
- **Increased control:** With their previous provider, the Slalom infrastructure team had to submit requests and support tickets to make significant changes to the environment. With AWS, they are able to spin up instances and make changes to their environment at will. This greatly accelerated migration and empowers Slalom to continually optimize their environment.
- **Enhanced security:** Several features of AWS provide a more secure environment for Slalom's business-critical data. With AWS, Slalom can use multifactor authentication on root accounts, preventing unauthorized changes at the infrastructure, networking, and compute layers. This capability was not available from Slalom's previous IaaS provider. AWS also provides comprehensive intrusion detection even in Slalom's lab environments. If suspicious traffic is detected, Slalom administrators receive an alert so they can investigate and remediate the issue.
- **Account service:** AWS provides superior account service compared to Slalom's previous provider. Slalom has been able to quickly resolve billing questions, get help with architecture validation, and obtain allowances for additional VPNs to accommodate their expansion.
- **Partner ecosystem:** Amazon provides open APIs and encourages a robust partner ecosystem, giving Slalom a wide choice of supplemental capabilities. For example, Slalom takes advantage of programmatic access to billing data, which allows them to closely monitor costs and set alerts to be notified when key spending thresholds have been crossed.



Lessons learned

Overall, Slalom was impressed at how seamless and easy it was to migrate their applications and services to AWS. They found AWS to be a fully mature cloud platform with excellent documentation and services that work as advertised. As with any major IT project, they learned some lessons along the way that could help other organizations have an even better experience.

- Make sure to optimize the SQL environment on the AWS infrastructure before mock deployments and production migration.
- Review the documentation thoroughly before beginning the process. This includes understanding the taxonomy of the system you are migrating to, which might be different than what the team is familiar with.
- There may be differences in how even basic tasks are sequenced and performed from one platform to another. Anticipate a learning curve and give everyone time to get up to speed.
- Make sure you pick the correct support level for your organization before beginning migration. For example, 24/7 phone support is available in some tiers but not in others.

Conclusion

Slalom demonstrates that being an ambitious technology leader does not mean blindly adopting the “latest thing.” At every step, they evaluate, test, and plan, ensuring that they know what their business goals are and that they will be able to achieve them. When they experienced issues with their technology provider, they saw it as an opportunity to move to a more capable system. Instead of treating migration as a burden, they saw it as an opportunity to optimize and upgrade their technology. And by partnering with Amazon and AWS, they have obtained the scalability, performance, and security they need to support their ambitious business goals.