Case Study

PrimeSource reduces TCO significantly by migrating SAP and other mission-critical applications to AWS Cloud

About PrimeSource

PrimeSource is one of the largest fastener distributors globally. As a renowned building material wholesaler in North America and an exclusive distributor of several iconic brands, the company also offers value-added consulting and retail services worldwide.

Engagement Snapshot

Headquarters: USA

Industry: Construction Materials

Project Type: Amazon Web Services (AWS) Migration

Engagement Model: Offshore

Key Technologies: AWS and SAP BASIS, CloudEndure (Now called MGN), AWS Backint, Database Backup and Restore, HSR, Pacemaker, MSCS, AWS FSX, AWS Backup, High Availability and Disaster Recovery.

aws
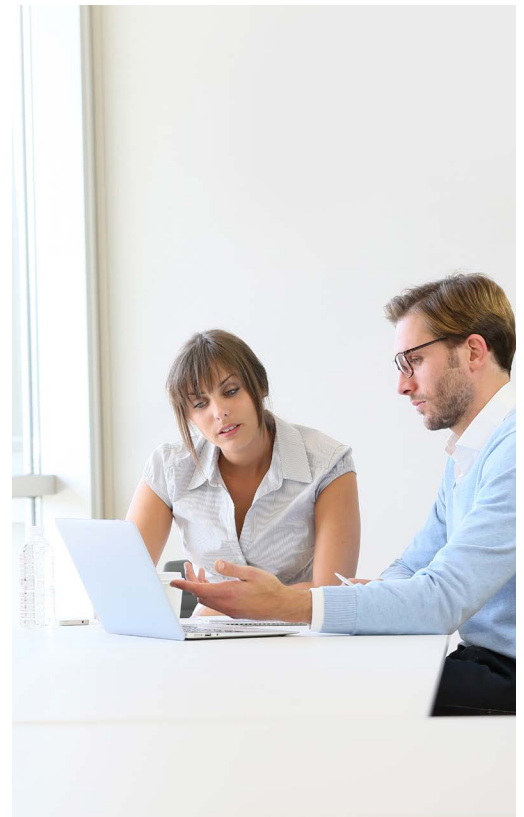**PARTNER**
Advanced Tier
Services

- Public Sector
- Immersion Day
- Solution Provider
- Amazon EMR Delivery
- SAP Services Competency
- Amazon Kinesis Delivery
- Amazon Redshift Delivery
- DevOps Services Competency
- Well-Architected Partner Program

Customer Challenge

PrimeSource faced multiple challenges around their existing Dell Virtustream Private cloud architecture. The infrastructure and networking solution were not able to meet PrimeSource's expectations related to productivity, compliance, reliability, and security. To stay agile and competitive in today's highly dynamic business landscape, it was critical to modernize operations and move their Private cloud infrastructure to the public cloud. This was additionally driven by the need to streamline processes and eliminate costs related to maintaining the server/ storage/ network hardware, backup, and ensure better monitoring.

PrimeSource needed a solution that was secure, facilitated quick provisioning of development, production and test environments, and provided effective Disaster Recovery. The client's SAP databases were hosted on physical servers in the on-premise as a combined MCOD and MCOS configurations. While moving to the cloud, the customer wanted to have the databases to Virtual Machines and separate the databases into individual VMs.

What made this requirement particularly challenging was the limited time frame to achieve the objectives. As PrimeSource's Data Center license was expiring, it was critical to rapidly migrate and stabilize servers in a short span of a few weeks.

Rising to the Challenge with a High-velocity Cloud Migration

After comprehensive due diligence and detailed comparative analysis across multiple compute parameters in partnership with YASH, PrimeSource decided to move ahead with AWS Cloud. As a strategic AWS partner with deep domain experience, YASH adopted a consultative approach to deliver end-to-end cloud migration advisory, designing, deployment, and administration services. Our experts recommended a multi-phase strategy with best-in-class technologies to assess, strategize, architect, deploy, and manage the process flexibly.

Why AWS Cloud?

PrimeSource chose AWS as it provided productivity, collaboration and performance along with the right cost for their business needs.

Using AWS would enable them to improve product quality, reduce inventory costs and scrap rework, accelerate product development and increase data accuracy. By moving their applications onto AWS they would increase throughput time, improve solution availability & performance, get world class IP protection as well as compliance adherence. AWS Cloud would further allow them to push the button on innovation, and reduce IT complexity. AWS can scale up, scale down and scale out as per the needs of the business.

With these benefits of AWS on offer, PrimeSource decided to move its SAP and non-SAP applications from Virtustream to AWS.

This migration involved several complex aspects - data migration, reconciliation of business and technical requirements, assessment of efficiency, and cost-effectiveness. The overall migration was a success in bringing down the administrative costs for PrimeSource along with providing future-ready infrastructure for better ROI and agility.

The Approach

We applied the lift-and-shift or re-hosting approach for the core system migration, focusing on cutting costs while preserving data integrity and facilitating rapid migration and compliance. YASH's migration services enabled cloud adoption in an agile manner using AWS Migration Hub and other optimization approaches. Our skilled and experienced AWS migration professionals ensured successful on-time migration by harnessing the managed AWS cloud migration services suite. YASH wanted to enable PrimeSource to better govern its cloud infrastructure, infuse agility for business transformation and migration, and construct a digital-ready environment for core SAP and non-SAP applications with AWS cloud services.

Our AWS Enterprise Architect team along with AWS Solution Architects designed a cloud migration roadmap with CloudEndure (Now called MGN) to migrate their existing data center landscape to AWS Cloud, as CloudEndure (Now called MGN) supports self-service, highly automated, lift-and-shift migrations with minimal business disruption. YASH proposed a robust solution that included:

Control Tower-based AWS multi-account structure to:

- Isolate workloads under a business unit and with respective Dev, QA, and production AWS accounts for each application
- Track the costs of each account and tag it to the owner of the application
- Implement centralized security and governance with Detective and Preventive (Service Control Policies) Guard Rails
- Enable centralized auditing via AWS Security Hub
- Enable AWS Single-Sign-On to access AWS
- Collect all logs centrally in a Log Archive Account
- Enable centralized cross-region backups using AWS Backup Service

CloudEndure (Now called MGN) as the migration tool to:

- Make non-HANA and non-DB applications available in the DR region
- Ensure rapid migration and adherence to timelines
- Support a wide variety of OS
- Ensure no impact on source application for migration
- Ensure real-time data sync till the cutover
- Easily test migrated server deployment in isolated environments
- Run multiple migrations and cutovers in parallel
- Ensure that replicated data is encrypted in transit

YASH provided alternative solutions for data migration, and security based on best practices:

- Provided an alternative solution to migrate applications sitting on RAID configurations to avoid RAID /multipath configuration

- Developed an alternative solution to migrate data Stored on NFS to facilitate the migration of SAP Installation Files on NFS to the Cloud

- SAP Market Place solution included on-premise HANA servers configured with UEFI boot on the physical server, market place image as it is SAP ready

- Automated the deployment of security groups to AWS using Gitlab CI/CD to deploy the Security Groups to Target AWS Accounts

- Centralized firewall solution for all intranet and internet traffic traversing on-premise and the cloud

- Leveraged Launch Wizard to deploy HANA HA setup and used AWS DataSync to replicate the data from primary to secondary on FSx

- Deployed AMURAA iMonitor ++ solution for IT and business. It monitors, analyzes, and alerts on all critical elements of PrimeSource's IT infrastructure and enterprise applications. This allows PrimeSource to comprehensively monitor its infrastructure, apps, data, virtual machines and business services. Its AIOps capabilities are helping PrimeSource:

  - Drive faster root-cause analysis (RCA), accelerate mean time to repair (MTTR) and initiate advanced level of automation and collaboration

  - Leverage highly scalable, real-time Automation Accelerators to eliminate error-prone manual work.

  - Extend Monitoring by leveraging 400+ out-of-the-box Monitoring PowerPacks

  - Speed-up the assessment of service impact, using Health-Availability-Risk dashboards

  - Automatically create and enrich tickets with triage information; and route to the right teams

We designed a multi-zone and multi-regional landscape for the critical SAP system to achieve high availability and disaster recovery solution. The DR landscape was designed using Bubble VPC so that in the event of testing a DR scenario, the existing production system and business continuity would not be affected.

Solution Architecture
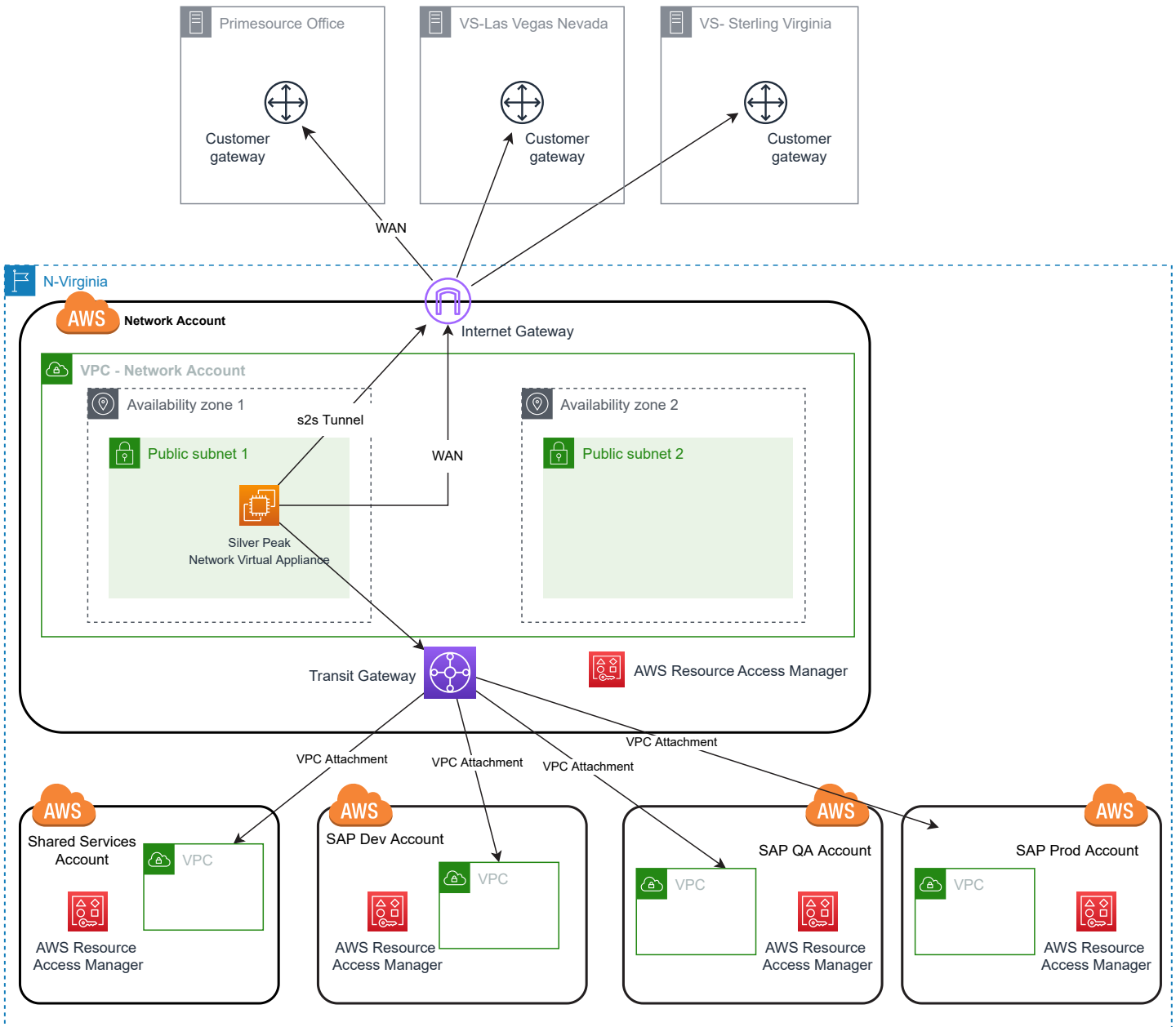
Business Outcomes

YASH helped PrimeSource build a AWS well architected, production-ready environment for core SAP and non-SAP applications, including infrastructure resilience. By leveraging the flexibility of AWS to virtualize and modernize IT systems, PrimeSource was able to reduce operational costs and shift its focus from managing technology to delivering services.

PrimeSource could actualize its business potential and eliminate bottlenecks around employing a third-party data center that impeded growth. Our migration process helped achieve:-

| 50-60% reduction in TCO | 45-50% reduction in downtime | 70-80% increase in agility and productivity | 35-40% reduction in operational costs | Migration and stabilization of servers in a short span of a few weeks |

In addition, YASH ensured no data loss, moving 100s of TBs of data, during the migration and significant enhancement in security, efficiency, and scalability of PrimeSource's server environment. With a fit-for-purpose migration to the AWS cloud, PrimeSource realized cost benefits by improving product quality, reducing inventory expense, and reducing the need for scrap and rework. On the productivity front, PrimeSource was able to achieve faster time-to-value, volume production, accelerated product development, increased data accuracy, and relevancy, reduced IT complexity, and increased throughput time.

As an added advantage, on the security front, PrimeSource now had access to world-class IP protection, 99.5% availability in data centers, improved solution availability & performance, continuous systems/ security optimization, and improved compliance. The migration also led to enhanced collaboration, increased product innovation, organizational transparency, and significantly reduced product and supply chain complexity.

Continued Security, Compliance, and Monitoring

While the team's task was to migrate SAP and other non-SAP applications from the private cloud to AWS Cloud, they proposed security and monitoring measures that would futureproof their AWS Cloud infrastructure and meet best practices. This included:

Improved Security of AWS Infrastructure

A solution to Automate the deployment of security groups to AWS using Gitlab CI/CD. This solution will improve security of AWS infrastructure and also help audit any changes made into these Security Groups.

Centralized Firewall Solution

A centralized firewall solution for all intranet and internet traffic will give better control and auditability of the inbound, outbound traffic as well as security of the application, system and data hosted in AWS. In order to implement the centralized firewall solution, YASH has configured AWS WAF for traffic traversing on-premise and cloud.

Customer Testimonial

"This was one of the most successful production cutovers of a critical system of this scale we have seen."

- PrimeSource Tech Leader

For more information and for your own personalized free assessment,
reach out to YASH today at **info@yash.com** or visit **www.yash.com**

YASH
Technologies

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