Allbirds

Engineering SAP® for greater operational efficiency and cost optimization, enabled by IP-leveraged Managed Services that enhance visibility, security, and performance — all aligned with AWS Well-Architected best practices.

allbirds

> EPI-USE has been an awesome partner. They quickly identified a number of opportunities to both improve our overall hosting level of service while at the same time significantly reduce our monthly AWS hosting costs.

Jon Kula, Senior Director of Technology, Allbirds

The Challenge

Efficiently manage SAP environment hosted on AWS

Improve SAP infrastructure set up on AWS platform

Align environment to follow **Cloud best practices**

Eliminating unnecessary costs

The Solution

Leveraging AWS security services like GuardDuty and Security Hub

Data protection and Disaster recovery

Monitoring and governance by leveraging Amazon CloudTrail and Amazon CloudWatch

AWS best practices for SAP, implementing the rightsizing recommendations from **Compute Optimizer**

Cost Optimization

Ensured business continuity AWS Well-Architected-Reviews for Allbirds

Billing-as-a-Service, which gives valuable insights into AWS cost and usage

The challenge

Allbirds approached EPI-USE Labs in 2022 about their need to manage their SAP® environment efficiently. We recognized the importance of identifying opportunities to improve their SAP infrastructure hosted on AWS, including overall SAP performance, stability, security, and response time. We planned to engineer SAP for greater operational efficiency and cost optimization, enabled by Managed Services, leveraging our Intellectual Property (IP). Our Managed Services enhance visibility, security, and performance, and are aligned with AWS Well-Architected best practices. Using SAP Early Watch, SAP HANA checks and SAP engineering expertise, we planned to align the environment with best practices, adding further operational efficiency.

The solution

After a comprehensive review of Allbirds' AWS infrastructure and SAP systems, we were able to make recommendations on improving security and performance while optimizing costs. We devised an action plan to make these changes in their environment effectively.

Security

- By using AWS security services, like GuardDuty and Security Hub, we were able to harden Allbirds' security posture and get real-time visibility continuously to prevent any potential security incidents. We also enabled SNS support for alerts and notifications. The SAP environment was adjusted to the correct SAP password policies as recommended by auditors.

Data protection and disaster recovery

- To minimize data loss, we suggested introducing appropriate backup strategies for EC2 instances. In addition, we encrypted unencrypted volumes to protect data. Furthermore, HANA Cockpit was installed for overall HANA database management, especially leveraging the scheduling of backups. A HANA replication server was also set up on Production to minimize disaster recovery time by using a secondary site. Once set up, multiple disaster recovery tests – using HANA point-in-time recovery and HANA replication – were carried out.

Performance

- By adhering to AWS best practices for SAP and implementing the rightsizing recommendations from Compute Optimizer, we were successful in eliminating the performance bottlenecks associated with EC2 Production workloads.
- We upgraded the EBS volumes from gp2 to gp3, ensuring better price performance.
- On inspection with SAP Service Preparation checks, many SAP parameters were not conducive to optimum performance. With the assistance of SAP Early Watch recommendations, various SAP parameters were adjusted (such as SWAP occurrences, the optimum number of work processes) to cut long CPU run times.

> Allbirds began using EPI-USE Labs for SAP Basis support in 2022. Since then, their team has been instrumental in improving the performance and reliability of our SAP systems. They're highly responsive and professional, supporting Allbirds with off-hour work whenever necessary. They are proactive with best practice recommendations and always available for support as needed.
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> Jon Kula, Senior Director of Technology, Allbirds

Monitoring and governance

- As part of the process of enhancing infrastructure monitoring and governance, we enabled Amazon CloudWatch. This allows Allbirds to monitor all servers in detail and to receive SNS-based alarm notifications for CPU, memory, and disk usage. In addition, anomaly detection using CloudWatch was used to reduce false positive memory alerts of HANA systems.
- To monitor SAP HANA parameters closely, we evaluated integration with Datadog monitoring to provide machine learning-based intelligent monitoring features, like anomaly detection and prediction.
- We leveraged Amazon CloudTrail for monitoring and tracking account activities within Allbirds' AWS environment.
- We used Icinga to enable the team to monitor the SAP systems and the HANA DB servers (disk space, memory usage, CPU usage) and check if all systems are up and running. Setting up certain thresholds allowed the team to receive alerts automatically via Client Central's incident management facility. Furthermore, an EPI-USE Labs-developed innovation, SAP Automatic Daily Checks, has been used to run on a daily basis to report any anomalies.

Cost optimization

- We observed that the increase in storage associated with Amazon EFS was contributing significantly to costs. By incorporating well-defined life cycle management policies, we could automate the transfer of infrequentlyaccessed data to EFS-IA. We switched from EFS-only backup to EFS- and S3-based backup, achieving substantial cost savings (approximately 120 percent decrease in EFS costs).
- EPI-USE Labs also provided Refresh-as-a-Service (RaaS), using our specialized SAP data transfer product suite, Data Sync Manager™ (DSM). This service enables the copying or refreshing of SAP clients with a subset of Production data, while anonymizing the data for non-production use. Allbirds was provided with a fully-functional Sandbox environment that meets their needs while efficiently using their existing server resources, resulting in a dramatic saving on infrastructure costs.

Managed Services

- As a Managed Services provider, we have always been proactive in performing AWS Well-Architected Reviews for Allbirds. Moreover, we conduct monthly account audits to ensure compliance with AWS best practices. We are available to them 24/7, providing personalized technical support for their SAP workloads and ensuring business continuity.
- Managed Services takes a proactive approach, and the innovations developed from within AWS and EPI-USE are our key differentiators (for example, Automated Transports developed by EPI-USE Labs to automate the transport change management process). At Allbirds, this process uses workflow requests and approvals in Client Central to initiate a bot to effect the transports in the SAP system, with no or little human intervention.

Billing-as-a-Service

- As an extension to our Managed Services, we also provide Allbirds with Billing-as-a-Service, providing valuable insights into AWS costs and usage. This service includes customized, easy-to-understand AWS monthly cost reports. Our dedicated team can assist with cost and billing queries, ensuring transparency of Allbirds' infrastructure costs.

Benefits

We assisted Allbirds in achieving an optimized and cost-efficient SAP-compliant environment on AWS. The main benefits were:

Improved security, data protection and disaster recovery using AWS security tools and back-up strategies.

Better performance by rightsizing and upgrading resources.

Full observability and governance for AWS infrastructure using monitoring tools, like CloudWatch and CloudTrail.

Cost optimization for EFS through life cycle management.

Well-Architected Review and monthly account audits.

Cost reporting and management through Billing-as-a-Service.

About EPI-USE Labs

As a global software solutions and managed services company, EPI-USE Labs helps you to maximise the performance, management and security of your SAP® and SAP SuccessFactors® systems. Our clients tell us every day how we have transformed their business operations.

Contact us to find out how we can help you solve your business challenges.

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EPI-USE Labs is a member of Group Elephant.