LTI
Let's Solve

A Larsen & Toubro Group Company

Case Study

Migrating & Managing SAP® Workloads on **Microsoft Azure Public Cloud**

LTI Book of Client Success Stories

Microsoft | Advanced Specialization
SAP on Azure

Introduction

The pandemic has upended how organizations conduct their day-to-day operations and sustain business. Globally, there was an increase in the volume of employees working from home using conferencing and other collaboration services. This has significantly stressed the back-end support systems. It has also resulted in increased usage of traffic on networks that connect end users to these services. Only providers with robust and abundant architecture who could deliver an uninterrupted customer experience were able to manage the increased load. Additionally, the pandemic has shifted the culture of globally- dispersed employees, allowing for virtual connections to ensure business continuity and engagement.

Besides accelerating the new working model, the change in culture has also demonstrated secure communication and seamless integration for various on-demand services, which were merely concepts for few enterprises until the pandemic. The surge in the migration to the virtual platform has given organizations a reason to rapidly migrate all workloads to hyper-scale public cloud.

During the digital transformation, a lot of focus has been on the data security and privacy, which has taken the forefront in the cloud era. The term 'digital security' refers to the resources employed to protect online identity, data, and other assets for businesses. Our clients and end users want to ensure data security and monitor their cloud presence. Due to the increasing amount of easily accessible data, data privacy and anonymization of data must also be in place, to prevent exploitation of critical data.

At LTI, we are passionate about solving problems for our customers and guiding them to a successful future. We adopt an innovation-centered, automation-first approach to deliver cloud services to drive the tech-powered growth – @pace, @scale. Empowered by our accelerators, we have proved to be more robust and valuable than ever before. Our clients rely on us to modernize their data ecosystem, migrate all workloads onto the cloud, including mission-critical Enterprise Workloads like SAP applications, and perform transformation projects for solving problems with a nearly zero human touch approach.

Businesses are developing a rapid understanding of the power of extreme technology. This new realization is driving the rapid adoption of move-to-cloud across various industries. Our unique services for assessment, migration, operation & optimization of workloads using cloud technologies have helped supply chains to tide over shortages, and drive demand-led planning and execution. And together with our clients and customers, we drive innovation & automation further post-migration, as businesses realize the power of the cloud and what business benefits they can realize to achieve operational excellence and significant cost savings.

The following success stories illustrate how mission-critical SAP workloads have been migrated to Microsoft Azure Hyper-scale Public Cloud and the business benefits that have been realized.

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1: **Automobile**

Complete SAP Landscape Migration to Azure Cloud

The client group is **client manufactures specialty vehicles like ambulances, buses, firefighting vehicles, recreational vehicles etc.** Through three segments: Fire & Emergency, Commercial, and Recreation, they serve a diverse customer base primarily in the United States. They offer customized vehicle solutions for a variety of applications, including critical public-sector needs, along with commercial infrastructure and consumer leisure.

Business Challenges

Limitation of current architecture with respect to scaling as hosted in three separate DCs.

High re-engineering cost and upfront cost for high availability solution without assured return.

Additional investment for DR site though required in case of disaster only.

Low response time and high latency with existing DR solution.

Low performance of existing platform with respect to increased demand.

What LTI Did

LTI designed Azure-based SAP ERP architecture on SLES OS and Azure Linux Virtual Machines along with 24/7/365 support and maintenance of Azure Cloud infrastructure. Through this, we ultimately increased the productivity and reduced the Total Cost of Ownership (TCO). LTI redesigned the secondary site with asynchronous replication of data while keeping automated launch of VMs in case of DR.

What was Achieved

25% cost reduction, uptime enhancement from 99.5% to 99.9%

Streamlined and consolidated infra with single window of operations.

Reduced overall cost of infra expenditure with on-demand DR.

Ability to rapidly scale up or down depending on new business factors.

Ease of operations by moving to Azure and reaping the benefits of cloud economics.

Overall LTI was instrumental in enabling the Auto Manufacturer to transform the SAP operations hosted on Azure cloud. This resulted in higher performance and cost reduction as well as on-demand disaster recovery using rapid cloud native scale up or down services.

2: **Manufacturing**

Agile, Demand-driven, and Responsive Supply Chain

The client is a **multinational conglomerate, that produces automotive parts such as batteries, electronics, and HVAC equipment for buildings**. The client was looking to migrate the entire SAP landscape comprising of SAP ECC, BW, Content Server, and SAP Console including OS/DB/NW upgrade from the legacy data center to Microsoft Azure Hyper-scale public cloud.

Business Challenges

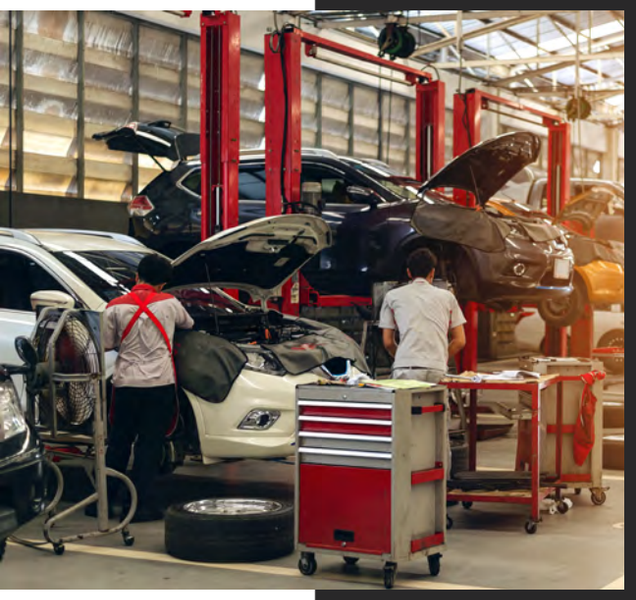
Limitation of current architecture with respect to scaling due to old hardware and unavailability of parts.

High re-engineering cost and upfront cost for high availability solution without assured return.

Low response time and high latency with existing DR solution.

Low performance of existing platform with respect to increased demand.

No scope for organic growth of the system. No disk availability.



What LTI Did

The team at LTI carried out a detailed design of the upgrade & migration of the SAP landscape from ECC 6.0 EHP4 SP05 to ECC 6.0 EHP4 SP19. We created a high-performance, scalable, agile, and fault-tolerant SAP platform on Azure cloud at US East 2 Location. Further, the team upgraded the systems to the latest OS from 2003 to 2016, DB from 2005 to 2016, NW from SP05 to SP19, and content server from 7.3 to 7.9. During the upgrade process, several issues related to the performance of OS/DB/NW were mitigated in a timely manner. We also used SAP Backup/Restore for homogeneous migration.

What was Achieved

Increased the performance of SAP ECC System by **40%**.

One-Stop-Shop for end-to-end BASIS and infra activities.

Cheaper business continuity due to reduced infrastructure cost.

Enhanced business agility leveraging Azure functionalities to rapidly scale up or down.

Ease of operations by moving to Azure and reaping the benefits of cloud economics.

Resilient and reliable target landscape by implementing HA and DR.

LTI enabled this manufacturing conglomerate to deliver business value through its domain-led solutions and technologies, helping the company get a tighter control on their supply chain and optimize processes with operational excellence with a human touch.

3: **Insurance**

Datacenter- Lift and Shift Migration & SAP Transformation to Azure Cloud

Our client is one of the **world's leading organizations, which delivers reinsurance solutions to the Life/Health and Property/ Casualty insurance industries**. They work closely with consumers to learn about their operational and strategic goals, offering a wide range of products, tools, and resources that aim to support their ongoing development, success, and growth.

Business Challenges

Highly complex platform due to the number of critical transactions being processed, user spread & multiple systems integrations.

Multiple service providers and internal IT teams managing platform operations.

The current platform had multiple interfaces to other systems and a few infra-appliances are out-of-support.

On-premises infrastructure was expensive and difficult to maintain.

What LTI Did

LTI created a roadmap for the client's cloud adoption strategy to migrate SAP workloads to Azure Cloud. The client's SAP landscape comprised of SAP ECC 6.0 EHP8 system with HANA DB 2.0 and other SAP Solution components (177 active servers, 80 DR Servers in total). LTI deep-dived further and provided a high-level design to standardize the architecture, processes, and also streamline the support models. LTI also defined implementing the extreme cloud automation and cost optimization approach. With the extensive program plan, LTI's highly experienced team seamlessly migrated the workloads with a well-defined strategy of lift-and-shift migration model of on-premises workloads to Azure public cloud. The solution also included the implementation of a Disaster Recovery environment for business-critical workloads.

What was Achieved

Increased the virtual footprint and reduced the physical ones, thereby reducing administrative overheads.

Improved performance through SAP HANA upgrades on the cloud.

Future-ready platform that can handle future business growth with cost and operational efficiency

LTI was instrumental in positioning and executing an end-to-end Datacenter lift and shift migration program to the public cloud with its well-defined approach for seamless migration and transformation of the workloads. We further engaged and optimized the cloud-managed services and streamlined the operations process with an easy-to-manage and maintain solution, along with significant cost reduction.

4: Consumer Packaged Goods

Designing Azure Landing Zone & Integration of Existing Tools in a Complex SAP Environment

The client is **a growth-focused consumer packaged goods business and strategic bottling partner of a multinational beverage company**. Our client holds a portfolio as one of the strongest, broadest, and most flexible in the beverage industry, offering consumer-leading for premium product categories. Their services cater to a growing range of tastes with a wider choice of healthier options with increasingly sustainable packaging that serves more than 600 million consumers across a broad geographic footprint of 29 countries on three continents.

Business Challenges

Customer infrastructure services hosted on a third-party DC with managed services for server, network, and security in a multi-vendor led ecosystem.

SAP landscape managed by third-party vendor.

Multi-vendor strategy to develop, design and migrate their business-critical SAP landscape to Azure using green field approach.

Achieving landscape uptime, high-availability, operational efficiency in a hybrid model with reduced cost.

Re-platform of the operating systems to host and support the SAP S/4 HANA /ASE on Azure.

Quick environment deployment turnover time leveraging tools and accelerators.

What LTI Did

LTI produced an industry standard high-level design document to build a secure, scalable Azure landing zone which caters towards a high availability of the SAP applications and DR environment for business-critical SAP applications in a hybrid model. LTI was also responsible for providing a solution for rapid deployment of the virtual machines and SAP landscape to support migration and meet program SLAs in the defined timelines. Additionally, LTI provided solutions for co-existence of backup, monitoring, security and ITSM tools supporting the Azure and On-premises infrastructure. Furthermore, the tool was evaluated to achieve operational excellence.

What was Achieved

High-level design for robust Azure landing zone to host SAP landscape and connect to on-premises environment in a hybrid model.

Hosting SAP S/4 HANA and ASE on Azure by leveraging services like ANF, co-existence of cloud native and existing backup, monitoring, and ITSM solutions.

Accelerators for rapid deployment of virtual machines and SAP services for migration.

Tool for predictive analysis of customer environment to achieve operational excellence.

Met existing operational SLAs in multi-vendor support environment.

With its expertise in building secure and high-available landing zones, LTI was well-positioned to meet the client's business requirement on short notice. The LTI team quickly understood the client's business requirements and complex services that are supported in a multi-vendor environment. Despite the limited time provided, LTI produced a high-level design document proposing various cloud native tools and accelerators to provision the SAP landscape as a hybrid model along with co-existence of various tools to reduce costs and achieve operational excellence. After being reviewed by a variety of stakeholders, OEMs, and vendor partners, the design document was approved for deployment.

5: **Energy**

SAP Landscape Migration from On-Premises Data Center to Microsoft Azure with Minimal Business Impact

Our client is **a leading European energy company, driving the transition to a sustainable energy system through initiatives in renewable production and climate smart energy solutions**. For over 100 years our client has electrified industries, supplied energy to people's homes and modernised the way of living through innovation and cooperation. With a goal of enabling fossil-free living within one generation, the organization is looking beyond its industry to see where they can make a real impact.

Business Challenges

Customer faced several challenges in their incumbent system.

Struggling to modernize its IT landscape due to limitations of current architecture.

Migration of SAP landscape to Microsoft Azure platform.

What LTI Did

LTI built a high performance, scalable, agile, and fault-tolerant Azure platform with minimum business impact by deploying a highly available solution across Availability Zones (AZs) to avoid any level of single point of failure. HANA DB was deployed across AZs with HSR and DR enabling data preload options. ASR was considered for non-DB systems as a DR solution. Automation of export/import was implemented by optimising and sizing source & target Databases. With these services in place, LTI was successful in seamlessly migrating the SAP landscape to Azure.

What was Achieved

Secure landscape and business access on public cloud.

First customer to have 8TB of production data on Azure.

Improved performance, availability & system stability.

Business agility: The customer is now able to scale up and scale down their services on demand; reduced TCO and increased productivity, quality of remaining SAP infrastructure.

LTI's proven migration factory model was instrumental in migrating the customer's critical SAP workloads on to Azure cloud.

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