



How Lovisa supercharged their global retail infrastructure by moving to AWS

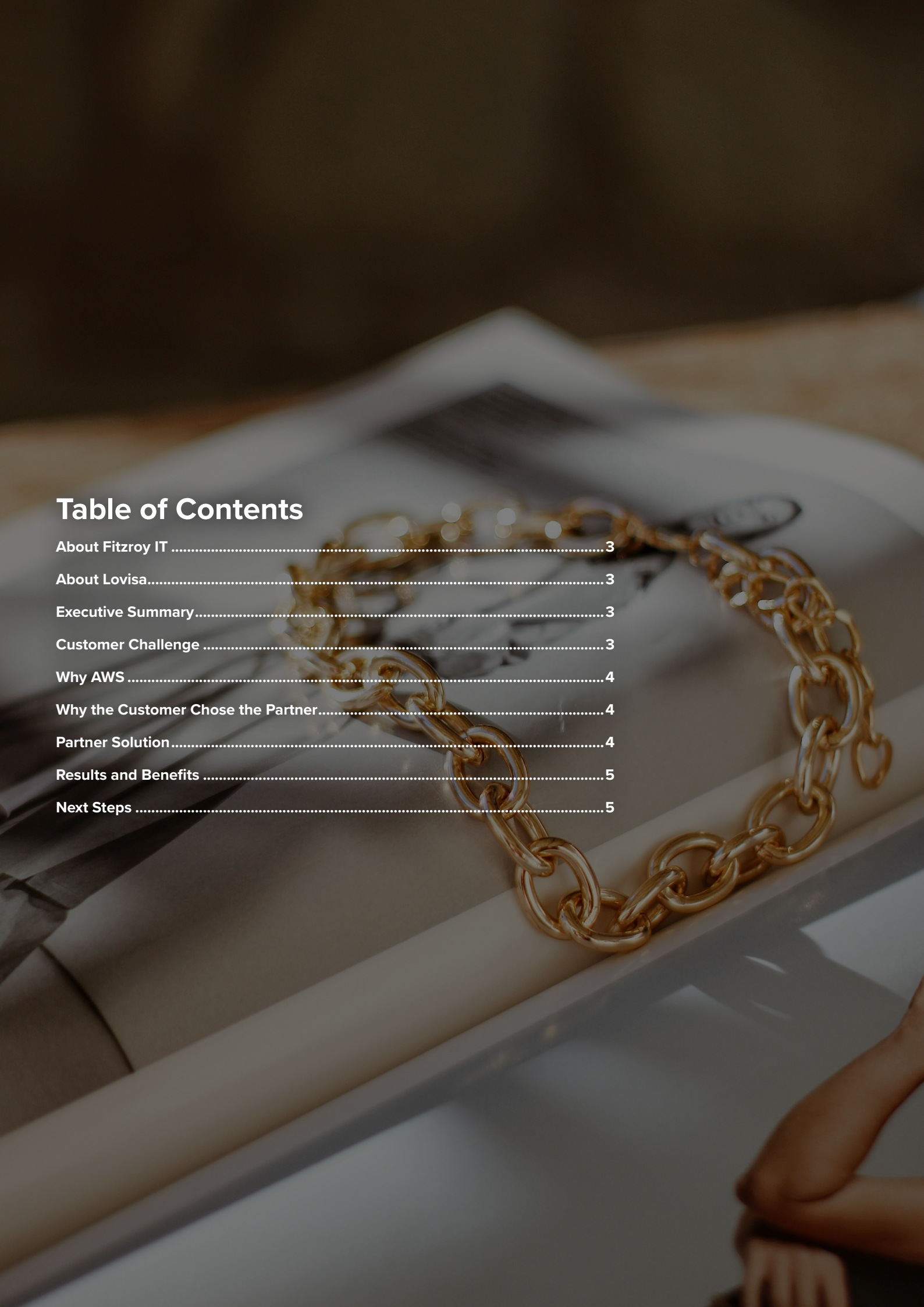
Lovisa Case Study

FITZROY

Level 1, 383 Smith Street
Fitzroy, Victoria 3065
1300 FITZ IT
www.fitzroy.it

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About Fitzroy IT

Fitzroy IT are Advanced AWS partners with a team of Certified Professional AWS engineers with extensive industry experience.

Whatever your needs are, we can help. Our experts can assist with Infrastructure, Migrations, DevOps, Well-Architected Reviews, Ongoing Support and Software Development. We can even educate and upskill your staff.

About Lovisa

Lovisa was created out of a need for on-trend fashion jewellery at ready-to-wear prices. Their trend spotting departments worldwide take inspiration from couture runways and current street styles to deliver new, must-have styles to customers.

They are a fashion-forward jewellery brand that caters to everyone, with 150 new styles being delivered to stores each week. They launched their first store in April 2010, and now operate in more than 20 countries with 600 stores globally, with continued hyper growth planned via new stores and eCommerce.

Executive Summary

Lovisa is a multi-national retailer who sells fast-fashion jewellery in bricks-and-mortar stores and online. Their hardware was rapidly aging and running out of capacity which led to interruptions to business.

Fitzroy IT proposed a migration plan to move Lovisa's operations into the AWS Cloud with minimal disruption. As part of the migration, right-sizing of all servers was undertaken to ensure the perfect balance between performance and cost-efficiency.

The migration took place over four separate stages and the enormous amount of pre-planning undertaken meant that the process was extremely smooth. performance testing carried out post-migration indicated that the batch processing jobs were, on average, 65% faster than the on-premise hardware.

Customer Challenge

Lovisa's retail infrastructure was running in an on-premises data centre, but their hardware was aging, compute power was strained and they were running out of storage capacity. This was putting pressure on their batch processing jobs, which were in danger of overflowing the time allocated to them.

Facing the prospect of significant hardware expenditure, Lovisa needed to find a cloud provider with global reach, and support for future growth, reliability and performance. Another critical factor was the availability of tools to make the migration seamless, as well as the ability to utilise the existing investment in Microsoft Licenses in the cloud environment.

Why AWS

AWS was the logical choice for Lovisa for a vast number of reasons. AWS, and Fitzroy IT, provided support throughout the entire migration process, from decision-making and pre-planning to post-migration testing and review. AWS provided significant assistance through their Windows Rapid Migration Program (WRMP) and Optimization and Licensing Assessment (OLA) programs, and the AWS Migration Factory was the perfect tool to support a seamless migration process.

Other factors that recommended AWS were the flexibility they provided for Lovisa to bring their own licenses to EC2 Dedicated Hosts, which resulted in a significant cost saving, as well as the provision of a dedicated DirectConnect link that allowed Lovisa to quickly and securely replicate on-premise servers and migrate them to AWS without the data going over the public internet. This setup also allowed for a successful hybrid model during the multi-phase migration.

Why the Customer Chose the Partner

As an Advanced Consulting and Well-Architected Partner with a specialisation in Microsoft Windows Migrations, Fitzroy IT was perfectly placed to design Lovisa's cloud infrastructure and lead all phases of the migration.

But the main reason that Lovisa chose to engage with Fitzroy IT was its friendly, dedicated and on-call staff, who are experienced with large-scale migrations and all the associated activities, from analysis and pre-planning and discovery, through to execution and testing for customer acceptance.

Partner Solution

With nearly 30 servers, connecting to Head Office and hundreds of stores in more than 20 countries around the world, the migration plan adopted by Lovisa needed to include minimal downtime and the ability to thoroughly test servers after cutover.

Utilising their experience running OLAs, Fitzroy IT ran a multi-week assessment and planning phase looking at Lovisa's on-prem infrastructure and networking in detail. This provided a solid foundation for all of the subsequent migration works. Fitzroy IT also ran many workshops with Lovisa to dive into their environments and document the dependencies relating to the migration that had previously never been documented.

Lovisa's AWS infrastructure was built using infrastructure-as-code and numerous AWS services were utilised to create a well-architected environment, including Network and Application Load Balancers, EC2 Dedicated Hosts, Transit Gateway, NAT Gateway and CloudWatch Dashboards.

After taking into considerations server configurations, loads and store opening hours across 20+ time zones, the migration of the servers was split into four separate phases, beginning with a proof-of-concept migration of a single region. Extensive testing was done to ensure that the latency on the DirectConnect link was low enough to support a hybrid cloud model with servers hosted in AWS, on-premise & other cloud providers.

After the successful proof-of-concept, AWS Migration Factory was utilised to move live machines to AWS and keep them synchronized to prevent data drift until the agreed cutover time. Each server had a detailed cutover & testing plan, much of which was scripted or automated to ensure that the outage period was kept to a minimum.

During the cutover process Fitzroy IT also worked with a number of external vendors to ensure configuration updates happened in a timely matter within the cutover window.

Results and Benefits

The Migration Plan that was adopted moved logical groups of servers (related database and app servers). This allowed for setup, migration and reconfiguration and thorough testing in a reasonable timeframe whilst minimising server downtime. This approach meant no sales were lost, while retail stores were unaware of the outages and testing was able to be carried out during trading hours.

For Lovisa, the greatest benefits have been realised in the areas of performance and reliability.

Overnight batch processing tasks have seen improvements between 30% and 90%, with the total processing time dropping from 2723 minutes to 958 minutes – a 65% improvement.

But perhaps the best outcome of the migration is that Lovisa has flexibility and a pathway for growth in the future.

Next Steps

Lovisa's migration was at its core a "lift-and-shift". During the planning phases, numerous areas of improvement were identified and Lovisa are instigating a modernisation program where they will look at:

- moving to RDS
- high-availability for SQL
- improved application elasticity
- utilising additional AWS services such as Systems Manager to manage and maintain OS updates
- implementing a data lake for modernising their approach to BI
- cost-optimisation

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Multi Cloud Network Architecture

