DiGiCOR

Customer Success Journey

10x Faster LiDAR Data Processing

How DiGiCOR and ASUS Accelerated Outline Global's Processing with AMD EPYC

Company

Outline Global

Location

Australia

Industry

Geospatial

Overview

Previously, DiGiCOR successfully upgraded Outline Global's storage infrastructure. Upon seeing the increase in productivity with the storage upgrade, Outline Global contacted DiGiCOR to address their processing needs.

Objectives

- Reduce processing times of large datasets to improve productivity and expedite the delivery of critical data
- Improve CPU utilisation in single threaded and parallel processing workloads
- Adopt the latest generation AMD EPYC Processor

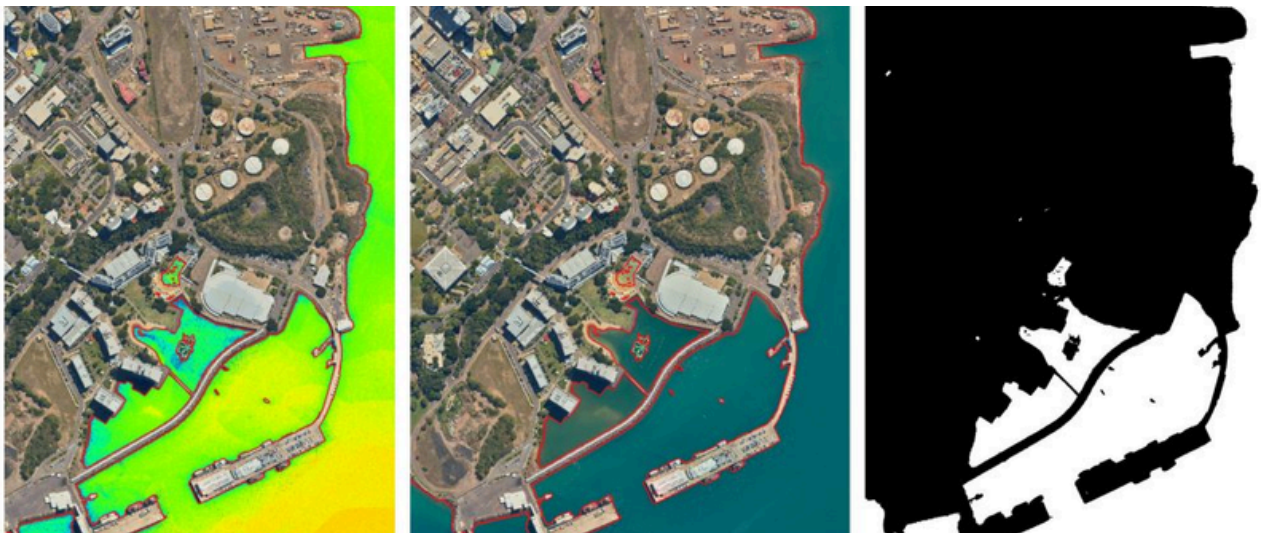
Results

- 10x improvement in processing performance
- Enhanced business output and deliverables
- A scalable, future-proof infrastructure
- Cost-effective POC services

The Challenge

In the past, Outline Global used high-performance workstations to process their data. This legacy infrastructure couldn't handle the heavy CPU loads required for the tasks, leading to delays and inefficiencies due to several key issues including:

- **Long Processing Times**: To process Lidar data, large datasets need to go through four mathematical type processing steps. This data processing took days to complete due to limited computing resources. This not only affected productivity but also delayed the delivery of critical data.
- **High Workstation CPU Utilisation:** The existing systems were heavily CPU-bound, causing significant slowdowns in data processing. The team required much more computing power to handle the elevation calculations necessary for their work and a scalable, future-proof infrastructure, streamlining the growth.
- **Using latest generation compute solutions:** Initially, Outline Global did not fully recognise how much a hardware upgrade could enhance their business output until DiGiCOR demonstrated the potential gains.



Implementation

DiGiCOR provided onsite consultation and workflow analysis to Outline Global, monitoring each process to configure the perfect solution for their needs. DiGiCOR provided Outline Global with a cutting-edge solution in the form of an **ASUS RS500A** server, equipped with an **AMD EPYC** Processor, boasting **64 cores** of immense computational power and 8 memory channels. This server was designed to handle the LiDAR department's CPU-intensive workload efficiently and greatly increase processing capacity.

The server was pre-staged at DiGiCOR's facility and deployed on-site, allowing Outline Global to seamlessly integrate it into their operations with minimal disruption.

> *"the ASUS server set-up DiGiCOR provided us is handling a lot faster, 5 to 10 times as fast. This means that we are a lot more efficient, a lot less turnaround time. Something that might take us a couple of days is now only a couple of hours"*
>
> ***- Ian Smith,** Lidar Manager*

Results: The Lidar Team Now Processes Data in Hours, Not Days

The results from the new infrastructure were immediate and impressive:

- **10x Improvement in Processing Speed:** The most transformative outcome was the reduction in processing time. Tasks that previously took days were now completed in a matter of hours, allowing the LiDAR team to improve their workflow significantly.
- **Enhanced Business Output:** With much faster processing, Outline Global's Lidar department could handle a greater volume of projects, increasing overall efficiency and allowing them to deliver more value to their clients.
- **Cost-Effective POC Services:** DiGiCOR's Proof of Concept (POC) demonstrated the system's capabilities, providing Outline Global with confidence in their investment. The savings realised during the POC made the transition to a permanent solution a clear choice.

The new system was designed with scalability in mind, ensuring that the infrastructure can expand seamlessly as data volumes grow to meet demand.

Outcome

More efficient and productive work environment.

Ability to scale the systems as a long-term solution.

Confidence in investing for a long-term cost savings.

Conclusion

The collaboration between Outline Global and DiGiCOR resulted in a remarkable transformation. With the implementation of scalable infrastructure and cutting-edge technology from technology leader ASUS, the Lidar team now processes data in hours instead of days, a 10x improvement in processing speed. This case study demonstrates the immense value of investing in high-performance computing for data-intensive applications, with Outline Global now able to increase their business output and deliver results faster than ever before.

With minimal downtime during deployment and a successful Proof of Concept, DiGiCOR has solidified its reputation as a trusted partner for high-performance solutions. The team at Outline Global now has the tools to continue leading the field in aerial data and elevation mapping, all thanks to the right technology investment at the right time.

> *"DiGiCOR has been a pivotal partner for us since introducing the ASUS AMD high-performance CPU servers. The speed and reliability are outstanding, handling our most demanding tasks effortlessly. We've seen a noticeable boost in efficiency, 10 times faster for our complex computing processes. Their excellent customer support has made the entire experience seamless. Highly recommend them for anyone needing top-tier computing power."*
>
> *- **Matthew Barnes,** Head of Business Operations*

Featured Solution

ASUS RS500A Series

- **64-Core AMD EPYC Processor:** Optimised for multi-threaded workloads like Lidar data processing, this processor was the core of the performance boost.
- 16 DIMM Slots to provide best-inclass memory capacity and bandwidth
- Easy maintenance and debugging
- 4 SAS or SATA drives

About Outline Global

Outline Global is a leading provider of advanced geospatial solutions, specializing in LiDAR, photogrammetry, and spatial data services to support industries such as environmental management, mining, agriculture, and urban development. Leveraging cutting-edge technology and a highly skilled team, Outline Global offers end-to-end data collection, processing, and analysis services to deliver precise, actionable insights. Their projects range from large-scale topographic mapping and vegetation monitoring to site-specific 3D modeling and asset management. Committed to innovation and accuracy, Outline Global is dedicated to empowering clients with geospatial intelligence for informed decision-making.

About DiGiCOR

DiGiCOR was founded in 1997 with the goal of becoming a major player in the niche ICT infrastructure market in Australia and New Zealand. Our focus is in providing server, data storage, workstation, networking, edge computing, and IoT solutions. From designing IT infrastructure to deploying the solution, we cover the whole journey for our customers. Traditionally, we were known for Supermicro solutions, but in recent years we have expanded our partnerships to include servers, storage, workstations, and networking from Supermicro, ASUS, Chenbro, Seagate, iXsystems, Hitachi-Vantara, and Juniper Networks.

What can DiGiCOR do for Your Business?

DiGiCOR has helped Outline Global achieve 10x Faster LiDAR Data Processing. It’s your turn to take action.

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