Cardno

- Professional infrastructure & environmental services company with 200+ offices
- Preconfigured all APs for easy out-of-box setup at remote sites
- New Meraki features added on ongoing basis provide team with peace of mind

Cardno, an Australia-based professional services, social and physical infrastructure company, is striving to develop and improve physical infrastructure globally. Having to plan, design, and deliver commercial and private projects around the world means that the Cardno team is mobile, in constant communication with clients and internal teams, frequently sending files back and forth from project sites, and staying on top of many moving pieces – all of which requires a reliable connection.

Though Cardno's roots are in Brisbane, it has now expanded to 90 offices within Australia and to over 200 offices outside of the country, including in a few emerging markets such as Africa and Southeast Asia. With a lean networking team of four people, one can only imagine the amount of work and challenges the team would face without a unified management platform. Fortunately, Cisco Meraki cloud networking provides a single pane of glass view of the Cardno network and simplifies nearly everything – from pre-configurations to controls to analytics and reporting, all with a few clicks in the dashboard. To date, Cardno has deployed Meraki MR16 and MR18 Access Points, as well as Meraki MX60 Security Appliances, to offices worldwide.

> When we first started our journey with Meraki three years ago, we were looking to standardize equipment and have a simple deployment. Today, we are replacing every non-Meraki AP we come across with a Meraki AP and becoming experts with the dashboard.

— Cristian Lighezan, Cardno Senior Network Engineer

When the team needed to set up a new wireless connection at a branch in Nigeria, they encountered challenges – language barriers, hardware import limitations, and lack of staff, just to name a few. To ease the deployment and mitigate risk, the team configured the Meraki AP pre-deployment. Then, once the hardware was delivered, Cardno hired a third party contractor who talked to Lighezan on the phone to walk through the setup. With only this late night phone call, the remote branch was up and running within a couple of hours. This solution also allowed for cost savings, increased efficiency, and the ability to set up and manage the network remotely, rather than flying someone out.

Cardno builds its business by making proposals and winning projects. Often, Cardno's customers are specifically concerned about

timelines and finishing projects by a certain date. During the bidding process, the network setup is a factor in the timeline. Cardno makes the Meraki setup as effortless as possible by configuring all APs prior to deployment, relying on non-technical personnel to set up APs, and creating an easy-to-follow office setup guide. As a result, customers are attracted to Cardno because they save on costs, as Cardno doesn't spend extended time setting up and tearing down wireless networks on project sites.

In addition to an easy network install, site-to-site connectivity was critical for the IT team as they moved away from the hub and spoke model, in order to extend the network. Now, with MX60 Security Appliances at 60 Australian branches and on project sites, Cardno has been able to create a multi-site environment. Communication between sites is mission-critical for the Cardno team to meet client demands. One specialist may be on a customer site performing an audit, send files back to the office, and ask for documentation back, making strong network connection essential.

The MX60 Security Appliance, like all other MXs, supports dual WAN uplinks as well as a USB 3G/4G uplink. These uplinks can be used simultaneously, or configured to provide automatic failover in the event a primary uplink goes down, providing peace of mind to the team as they cannot afford downtime or disruption. In addition to uplink failover, every MX supports active / passive warm spare failover to a secondary MX, ensuring appliance integrity. The Meraki hardware and dashboard also have the intelligence to determine when a link is down and can automatically switch to a backup link, saving the IT team time and resources.

With so many branches, the team is taking full advantage of preconfigured templates to apply the same settings across all locations. For example, with the use of content filtering, an employee's network connection experience is the same across all sites. This creates scalability and company compliance, while enabling users to reap the benefits of the Internet. Traffic shaping is also used to maintain a beneficial network for all users. In the past, high-activity users would saturate the network with a few uploads, but today, bandwidth limits per client are in place so the network is never saturated from a single person or activity.

On the MR wireless products, the team implemented 2 SSIDs – one for guests and one for staff. To minimize mobile data consumption and to make sure employees do not exceed data limits, the team enabled mobile devices to connect automatically to the guest network when an employee walks into a Cardno branch. This has not only lowered data usage dramatically, but it has also created substantial cost savings for the organization.

All network activity is assessed through the dashboard. Even as the IT team uses dashboard analytics to determine where large amounts of traffic are going and coming from, they are delivering similar monthly reports to business unit managers to provide a

better view of what employees are doing day-to-day. Each business unit manager is responsible for an individual branch, including the efficiency of employees, so Meraki analytics and reporting play a crucial role in making organizational decisions.

Another compelling technology is the ability to take detailed short-burst packet captures, rather than having someone physically present, to help troubleshoot technical issues. Packet capture, which captures detailed traffic for analysis, is integrated with CloudShark and available on any device. If people complain about slow connectivity and applications not working correctly, the team can easily isolate the network issue and troubleshoot.

Today, Cardno's network functions seamlessly at all worldwide sites. The platform has removed worry, messy configurations, and inconsistency, while bringing ease, visibility, and a reliable, consistent user experience. Cardno's cross-regional use of Meraki products and cloud management of all devices is a true testament of the cloud and the flexibility it can provide to an organization.

> One of our favorite parts of Meraki's platform is that it evolves over time. It's not like you buy the box and that's it until you buy a new model. Instead, the Meraki team is always adding new features and benefits.
>
> — Cristian Lighezan, Cardno Senior Network Engineer

This has provided the Cardno IT team with renewed confidence that they can fulfill their company's networking needs.