Hyperconverged infrastructure enables rapid response to new markets

Macquarie Cloud Services | Size: 500 employees | Industry: Cloud services | Location: Sydney, Australia

Macquarie Cloud Services (MCS), a Macquarie Telecom Group business, is redefining how cloud and hosting services are delivered across Australia. Recognizing that no two customers start from the same place or have the same goals, the company is building its delivery model on the premise that no two solutions should be the same either. Its enterprise-scale data centres, operated by more than 100 engineers who hold NV1 security clearance from the Australian government, provide leading-edge in-house security and telco capabilities in compliance with global information security risk standards as well as standards set by the Australian Signals Directorate (ASD). The company’s over-arching goal is to offer highly available, secure designs that range all the way up to a 100 percent service-level guarantee for its most mission-critical customer environments.

For more information, visit [macquariecloudservices.com](http://macquariecloudservices.com).

### Challenges

- Reduce costs associated with spinning up new, remote environments
- Guarantee uptime, flexibility, and capacity to maintain high customer satisfaction
- Configure and deploy additional capacity easily and remotely
- Respond to growing customer opportunities

### Solutions

- Cisco HyperFlex™ hyperconverged infrastructure with additional compute-only nodes
- Centralized, remote insight using Cisco Intersight™—Essentials to optimize storage, maintain high availability
- Trusted, dependable Cisco® Nexus 9000 Series network switching

### Results

- Gained ability to scale computing needs independent of storage
- Reduced licensing and hardware costs, increased operational efficiency
- Acquired a single pane of glass view for remote monitoring
- Quick reaction to new markets

For more information on the Cisco HyperFlex hyperconverged infrastructure platform, visit [cisco.com/go/hyperflex](http://cisco.com/go/hyperflex)
Challenge: Quick, cost-effective response to new, smaller market segments

Locally owned and operated for over 18 years, Macquarie Cloud Services is an expert in managed and self-managed cloud hosting to suit the varying needs of Australian business and government, with more than 40 percent of federal agencies currently using its Protected Cloud service. The company’s four data centres in Sydney and Canberra—called Intellicentres—are built on leading-edge infrastructure, using a converged Cisco Unified Computing System™ (Cisco UCS®), Dell EMC, and VMware environment to guarantee 99.99% uptime.

“When we couldn’t find the perfect cloud solution for our customers, we built it,” says MCS Group Director James Mystakidis, noting that high customer satisfaction proves the model is working. “Independently-certified net promoter score (NPS) results show we are more recommended by our customers than any other industry provider.”

When MCS found an opportunity to extend its cloud services to Perth, it was looking for a lower-cost alternative to its traditional converged network approach.

“The market is much smaller in Perth so we didn’t want to have a high capital expenditure at the start,” says MCS cloud architect Ray Phoon, noting that the business case didn’t support a traditional storage-area network (SAN) model.

At the same time, the new offering needed to easily scale according to customer requirements, as well as allow for remote monitoring, configuration, and troubleshooting by the MCS support team in Sydney to guarantee a consistent, positive customer experience.

“It’s critical that we ensure our customers don’t start to have issues when they expand. That meant we needed a single pane of glass view into storage utilization and optimization in Perth, as well as a means to monitor overall system health,” says Phoon. “Our intent was to run Perth as a lights out facility with very limited staff.”
Hyperconverged infrastructure, a cost-effective choice

Based on an earlier, successful evaluation of Cisco HyperFlex and Cisco Nexus 9000 Series switches, MCS took the bold step to deploy a hyperconverged infrastructure in Perth. The evaluation involved a dedicated storage backbone for its management farm in Canberra and support for mission-critical DNS servers in Sydney, where VMware vCloud Director data is reliably stored on a Cisco HyperFlex stretched cluster—a single cluster with nodes distributed across geographically separate sites for high availability. Mission-critical systems running on Cisco HyperFlex in Canberra include customer management portals, Microsoft SQL and PostgreSQL database servers, domain controllers, DNS servers, and login servers.

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Ray Phoon
Cloud Architect,
Macquarie Cloud Services

Because Cisco UCS remains the underlying technology of the hyperconverged infrastructure, MCS has the benefit of using Cisco UCS Fabric Interconnect to remotely monitor and connect additional server capacity in Perth as required. Computing needs are scaled independent of storage, meaning more CPU and memory resources can be added without incurring additional hyperconverged software licensing costs. The current configuration in Perth is made up of three hyperconverged nodes plus two compute-only nodes, with a fourth hyperconverged node to be added soon.

“When an account manager comes to me and says a customer needs to increase storage by only a few terabytes and the cost to put in a dedicated SAN is prohibitive, we can easily use Cisco HyperFlex to meet that need,” explains Phoon. “Our hyperconverged infrastructure has opened the door to those opportunities, but at the same time we only pay for the resources we need.”

Cisco Intersight™ serves as the remote, cloud-based management console from which MCS engineers monitor activity in Perth. It provides a “single pane of glass view” so resources can be added proactively and easily, ensuring that a threshold of capacity remains available.

“Adding capacity is as simple as sliding in disks and then we take over from here in Sydney to configure it,” explains Phoon.
“Now that we have Perth, we’re on our way to standardizing Cisco HyperFlex as our solution for any new nodes we spin up. It has given us a good blueprint for growing our business and helping us to maintain our competitive edge.”

Ray Phoon
Cloud Architect,
Macquarie Cloud Services

**Staying nimble in a competitive market, keeping costs down**

Standardizing on a hyperconverged infrastructure in Perth has provided several growth opportunities for MCS moving forward. Not only is the company investigating new customer use cases—such as the ability to provide dedicated storage in a virtual network environment—but it’s also able to pass cost savings on to customers in the form of competitive pricing.

In addition to the savings realized on the software licensing front, the company saves valuable time and resources when it comes to provisioning new storage.

“Operationally, it’s much easier in a hyperconverged environment compared to a traditional disk array and SAN,” says Phoon. “In a SAN environment we require engineers to be on site to perform the zoning for each physical server we stand up. In our new hyperconverged environment, we’re able to cut that time down from one or two days to just a few hours.”

Based on its successful deployment in Perth, MCS is considering the possibility of building its hyperconverged infrastructure out to other remote locations in the future, including Brisbane.

“Now that we have Perth, we’re on our way to standardizing Cisco HyperFlex as our solution for any new nodes we spin up,” says Phoon. “It has given us a good blueprint for growing our business and helping us to maintain our competitive edge.”

“There’s a lot of competition out there from public cloud providers. People like to compare us to Amazon but our tailored cloud model is different. We are providing a high-touch, secure, managed cloud offering that’s as personal as an in-house IT service,” he adds.

**Products**

- Cisco HyperFlex
- Cisco Nexus 9000 Series Switches
- Cisco Intersight—Essentials
- Cisco Smart Net Total Care

Source:
1. Net promoter score +84; https://macquariecloudservices.com/customer-experience; independently audited Matrix CX March 2018

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