When OpenNebula began as a research project in 2005, cloud computing was still in its infancy. Amazon Web Services hadn’t been launched yet, and the engineers working on the project were focused on grid computing.

“We had a product called GridWay, which was basically an orchestrator of grid resources,” says Tino Vazquez, who was one of the project’s founders. “After we learned about the new trend of cloud computing, we thought that we could leverage our expertise managing and scaling grid jobs to do the same, but with virtual machines. It was a perfect match.”

So much so that by 2008, the founders had released an open source cloud management system. Two years later, responding to demand from early adopters like BlackBerry, they introduced a production-ready platform for the enterprise under the company name OpenNebula Systems. “Based on our experience on distributed systems and virtualization, we developed an innovative, flexible, modular architecture for virtualization management on large-scale distributed infrastructures, and that’s how OpenNebula was born,” says Vazquez, who is now the company’s VP of Engineering.

The OpenNebula cloud management platform has become a market leader, differentiating itself with its simplicity of use, open source code, modularity, and extensibility. “Our mission is to provide a simple but feature-rich, enterprise-ready technology to enable people to build their own private cloud solutions,” says Vazquez.

Over the years, OpenNebula’s adopters have moved beyond the high performance computing world, into telecoms, finance, and government agencies. “Our technology is broad enough to be used by anyone, so we have users and customers from a wide range of industries,” says Vazquez.

More recently, OpenNebula has attracted customers from the gaming space and the Internet of Things. “With the advent of the Internet of Things,” says Vazquez, “the need to reduce latency between the user and the service has led to this new paradigm of edge cloud computing, and we are preparing ourselves to be able to sustain this use case as well.”
It’s part of an overall industry trend that’s shifting away from the centralized cloud model, also known as cloud disaggregation. “The technology in our market is essentially driving us away from fully depending on a centralized cloud and needing to take advantage of having hosts do processing much closer to where the edge is,” says Abdou.

In its newest release, OpenNebula is introducing a Host Provisioning Tool, which enables users to quickly and easily provision resources on Packet servers close to the edge. They had first used Packet servers for the labs provided in its employee training sessions, and a few other services. “We liked the user interface and the pricing,” says Vazquez.

When it came time for a proof of concept of the Host Provisioning Tool, they needed a bare metal provider that offered a fully automated, API-driven experience. “We already knew the Packet API and platform very well, and could see that they were pushing to new regional and edge locations all the time,” says Vazquez.

With global reach and ease of deployment central to each company’s mission, the synergy was natural. “I think Packet is a perfect model because they are able to very quickly provide physical resources in a wide variety of geographic locations,” says Abdou. “OpenNebula is taking advantage of that capability to rapidly bring up new bare metal nodes and deploy containerized workloads, all from within our intuitive control plane. That’s quite unique.”

In practice, this means that any cloud administrator can quickly respond to a bump in traffic in a specific location. For example, if a company sees increased activity in Australia, “OpenNebula can provision a container somewhere near Sydney, load up the image on that computer, and then bring that into the cloud,” says Abdou. “Within a matter of minutes a cloud administrator can expand her private cloud globally. Bring up a new server, tear it down—all within a simple user interface.”