

SOFTWARE LEADERS EMBRACING INFRASTRUCTURE AUTOMATION



Cisco and Intel® partnering in innovation



Application experts from Apprenda, CliQr, DataTorrent, and Vnomic explain why they have integrated their solutions with Cisco Application Centric Infrastructure.

Building applications is one thing. Deploying them in data centers or the cloud is another.

“Let’s be honest; it’s a lot of work to put an application into production,” says Farid Jiandani, product manager at Cisco. “Applications have a series of dependencies that need to be mapped across a wide variety of environments. And they need to be correlated to networking constructs such as subnet groups, firewalls, access control lists, load balancers, and other L4 through L7 policies.”

There needs to be an easier way to deploy applications across heterogeneous environments, he surmises, regardless of the hypervisors and cloud management software being utilized.

“Software abstraction can help translate application dependencies into a logical policy model,” says Jiandani. “But then it needs to be translated into infrastructure jargon that tells the underlying systems how to behave.”

That’s why software leaders like Apprenda, CliQr, DataTorrent, and Vnomic are taking advantage of Cisco® Application Centric Infrastructure (Cisco ACI™)—combining application logic with policy control to automate the configuration of the infrastructure. Here’s how.

APPRENDA: IMPROVING APPLICATION SECURITY AND COMPLIANCE IN THE CLOUD

Apprenda provides a Platform-as-a-Service (PaaS) software layer for large enterprises developing their own custom applications. Because its customers operate in highly regulated industries such as financial services and healthcare, security and compliance are of great concern.

“We’ve always been able to isolate compute, memory, and storage, but our customers wanted more,” says Rakesh Malhotra, senior vice president of product management and engineering at Apprenda. “They would ask us about network isolation, and we never had a good answer.”

Until now. Apprenda recently integrated its enterprise PaaS with Cisco ACI, delivering the isolation—and resulting security and compliance—its customers were seeking.

“With ACI, the applications are decoupled from the infrastructure,” says Malhotra. “So our customers can utilize a shared, standardized infrastructure that offers full isolation instead of managing many silos of dedicated hardware.”

- Application development teams can work faster and are no longer confined to the limitations and rigidity of the infrastructure.
- Infrastructure teams can focus on higher value tasks like security, capacity, and efficiency instead of continually spinning up new virtual machines, firewalls, and load balancers.

“The best thing is speed and flexibility don’t come at the expense of security, compliance, or control. It’s quite the opposite. Standardization and automation dramatically improve those things,” says Malhotra. “Customers are the best barometer, and they are very, very excited about our ACI integration.”

CLIQR: AUTOMATING APPLICATION DEPLOYMENT ACROSS MULTIPLE CLOUDS

CliQr offers a single platform to model, deploy, and manage applications in hybrid—often multi-cloud—environments. Its CloudCenter Platform has been integrated with Cisco ACI to automate and optimize the end-to-end provisioning of infrastructure as part of the application deployment process.

“Deploying applications in the cloud takes far too long, it’s far too manual, and it can be very difficult to align heterogeneous environments like OpenStack and VMware,” says Jeremy Oakey, vice president of strategic alliances at CliQr. “Our platform simplifies the process by creating application profiles, and with ACI, we can use those profiles to automate the configuration of the cloud infrastructure.”

The programmability and automation of Cisco ACI is “extremely deep,” he adds, which is in stark contrast to other software-defined networking (SDN) architectures that are more “flat” and still demand networking expertise and manual provisioning.

“We share the same vision with Cisco surrounding abstraction, automation, and policy control,” says Oakey. “ACI is a disruptive technology, but our customers are keenly interested in putting it into production.”

DATATORRENT: UNIFYING THE MANAGEMENT OF BIG DATA APPLICATIONS

DataTorrent is a leader in real-time big data analytics, offering the world’s first open-source, enterprise-grade platform for stream and batch processing on Hadoop. That platform, DataTorrent RTS, is now integrated with Cisco ACI.

“Big data applications operate in a distributed compute environment, and they need to connect to multiple sources of data to generate business insight,” says Charu Madan, director of business development at DataTorrent. “As access requirements evolve, the process of securely configuring these connections becomes tedious, manual, and repetitive. That’s not only time consuming, but unsustainable with the dynamic nature of applications and real-time data.”

- The combination of DataTorrent RTS and Cisco ACI provides a unified view of a big data application, its data sources, and the underlying network.
- And it enables the creation of policies that follow the application and data sources even after changes have been made.

“We are leveraging ACI because it makes our product better,” says Madan. “The integration of the two allows big data applications to be developed and deployed faster, with better security and a single point of management.”

GET THE FORRESTER STUDY

Forrester calculated the potential ROI and typical payback period for Cisco ACI deployments. See the results and get the Forrester Total Economic Impact™ study from the [Cisco ACI Resource Page on UnleashingIT.com](#).

VNOMIC: EASING THE DEPLOYMENT OF SAP HANA APPLICATIONS

Vnomic provides an “application-centric, policy-driven, software-defined everything” platform, improving the development and governance of complex applications such as SAP S/4HANA. The Vnomic Declarative Application Delivery and Governance Platform has been integrated with Cisco ACI, automating the configuration and deployment of network fabrics in support of those large-scale applications.

“ACI makes the network a semi-magical thing,” says Derek Palma, president and CTO of Vnomic. “We define the application semantics and push them to the network with ACI, and it immediately produces a sophisticated fabric that can deliver everything the application needs—regardless of whether it is in a physical or virtual environment.”

Palma says Cisco ACI is more elegant than other SDN architectures that require additional infrastructure translation, where interfaces, protocols, routers, subnets, and shared resources need to be explicitly manipulated.

“With ACI, we never have to worry about the particulars of the networking layer—only semantics and connectivity,” Palma says. “The ACI constructs are robust, simple, and semantically pure. And we got it up and running in about a week.”

- Vnomic customers can now build large, complex application landscapes extremely fast, with servers, storage, network, hypervisors, and firewalls automatically provisioned.
- What used to take months can be performed in hours.

“These are very, very complex network environments, and they are being automated for the first time,” says Palma. “It’s like a new kind of factory where you can define what you want, push a button, and it just happens.”

“When you get certified by these standards bodies, it opens up a ton of new business opportunities,” Tate says, while adding the company’s size, geography, and status as a service-disabled, veteran-owned company also play in Alpha’s favor. “Our whole pitch is around security and data protection.”

- In the past, it took a week to get a new customer up and running on Alpha’s cloud. Using Cisco ACI, the same work can be accomplished in less than an hour—with full data isolation, better security, and demonstrable compliance with a number of industry standards.
- The extra time will be spent attracting new business, enhancing customer support, and creating new jobs for the local population.
- While Alpha generated roughly \$13 million in 2015 revenue, Tate estimates the company can “easily” net upwards of \$200 million in 2016.

“We are bidding on multimillion and multibillion dollar contracts that nobody else can touch, and it’s largely based on our security and compliance capabilities,” Tate says. “This stuff sells itself.”

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