the 451 group

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Kaavo targets multi-cloud deployment – private cloud support due

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Two-year-old cloud on-ramp provider **Kaavo** has added **Rackspace**, **Eucalyptus** and **IBM** Smart Business Cloud as execution environments for clients' workloads. It is also building out a private cloud version that can be used when either Eucalyptus or **C12G Labs/OpenNebula** is present to take care of the virtualization management piece. It has taken in some money from one of its partners, and may look for a VC round later in the year. It has 20 staff.

The 451 take

Clouds still aren't for the faint-hearted of technology, and as a result, there is a burgeoning market for on-ramps and tools that abstract complexity. The successful will evolve to provide multi-cloud service management and support 'best execution environments.' Beyond acting as gateways to basic per-user, per-CPU/VM, subscription or ad-sponsored models, users will require IT security, data management, integration and service aggregation, which is where Kaavo is heading.

Kaavo's IMOD (Infrastructure and Middleware On Demand) software runs on **JBoss**, **MySQL** and Apache, and provides 'one click' self-service deployment of server systems to clouds for running applications, a data-backup scheduler, and encryption for moving data in and out of the cloud securely via VPN connectivity servers in the cloud and internal datacenters. Each is treated as a stateful machine. The software also has a rules-based alert system for tracking an application's CPU, disk, bandwidth and memory usage via a dashboard.

IMOD can deploy and manage a single application across multiple clouds. Because it's not working from the bottom up, at the granularity of virtual machine image creation and management, it says that, in effect, the only thing that is really problematic for it in supporting applications and workloads across multiple clouds is the difference in network latencies. Other differences include the need to work through Rackspace IT tables versus **Amazon's** AWS APIs.

Systems integrators will be a key channel for it. The first is **NIIT Technologies**, which is both a customer and reseller. Another is **TechnoDyne**. It says most of its customers are running Web applications in the cloud or between private (and privately hosted) environments and a public cloud.

E-commerce company **SellPoint** is using Kaavo to offload data processing tasks from its privately hosted system into the cloud on a dynamic cloudburst basis. SellPoint has some four million website hits a day, processes 8TB data a month (peak) and uses a proprietary SaaS application (Apache Tomcat). It operates a hybrid model that pushes data from its privately hosted system into the cloud on an hourly basis. Each instance created on EC2 is self-sufficient, and only public domain information is put into the cloud. It uses the burst facility to scale to meet on-demand seasonal peaks, and to support new clients and new products. What's key is that Kaavo will enable it to migrate to other clouds in the event that Amazon becomes unavailable or it requires some additional resource.

Kaavo is also building out a private cloud version that can operate when either Eucalyptus or C12G/OpenNebula is present to take care of the virtualization management piece. It's only making this available to selected customers initially.

Competition

RightScale offers a templated on-ramp approach for getting users onto clouds, although Kaavo believes its IMOD user interface is more user-friendly and further reduces complexity. It also characterizes RightScale as targeting Ruby-on-Rails Web application and social networking startups, where its aim is to reach into enterprises and provide secure access to clouds. Other competitors include **CA Inc's 3tera**, **Morph Labs** and the open source **Hyperic**.

CloudSwitch provides a virtual private cloud environment in hybrid environments and is focused lower down the stack, Kaavo suggests. Amazon's own management mechanisms make it easy for users to perform basic tasks, but it's not very granular and isn't focused on encryption. **Elastra** and **Abiquo** could be considered competitive, while **Enomaly** and others work at a lower level, moving virtual machine instances between providers.