UNIVA UD

UniCloud 2.0

Enabling Public, Private and Hybrid Cloud Computing

Features & Benefits

- Support for public, private and hybrid cloud computing
  - Policy-enabled dynamic resource management
  - Cloud-bursting and cloud clustering within public cloud services
- Live migration of virtual machines with virtually no downtime or user impact
- Simultaneous 'dual-mode' support of both physical and virtual resources
- Policy engine for optimally matching resources to workload
- Flexible, on-demand approach to technical computing
- Security and technical support from the experts and thought leaders in cloud enablement

Real World Use Cases

UniCloud 2.0 is the ideal solution for a variety of real-world scenarios, such as high-throughput engineering organizations trying to optimize expensive software licenses or fair-share compute resources that require check-pointing. UniCloud is also a valuable product for small businesses and ISV appliance manufacturers who need a cloud enablement component for clients.

Overview

UniCloud is a cloud management software product that enables companies to build and manage private cloud computing environments and create hybrid clouds by extending their environments to public cloud services like Amazon EC2 or Rackspace.

With UniCloud, companies can ensure their highest-performance (and highest-value) applications are optimally utilized across a pool of virtual and physical shared resources that can exist in any cloud, public or private. In such an environment, jobs are always run on the most eligible resource available and can be live-migrated, checkpointed or sent to a data center or external cloud with zero downtime and no end user impact. As a result, users can maximize software license optimization, throughput and resource utilization while reducing costs.

Why UniCloud?

Try it now!

Visit www.univaud.com/unicloud/demo.php to request a live UniCloud demo

UniCloud 2.0 is a leap forward for organizations of any scale that seek the flexibility and mobility that cloud computing can provide. A groundbreaking product, UniCloud makes it possible to:

- Simultaneously manage 'dual-mode infrastructures' that consist of both physical and virtual resource nodes, the most common use case in a cloud scenario
- Integrate provisioning, infrastructure configuration, application configuration, and physical and virtual resource management into a single, unified product
- Live-migrate virtual machines proactively from one server to another to eliminate downtime or gaps in performance

IT professionals use UniCloud to:

- **Reduce computing costs:** UniCloud changes the economics of computing by enabling companies to leverage proven cloud services and pay only for capacity that they actually use.
- **Meet peak processing demand:** With UniCloud companies can leverage flexible, on-demand cloud resources to expand their computing capacity when needed, rather than having to provision for peak demand.
- **Pursue otherwise infeasible projects:** With access to previously unattainable computing capacity via UniCloud, organizations have the ability to do the kind of large-scale processing that might have been impossible otherwise.

How It Works

With UniCloud, companies can form an elastic compute infrastructure or cloud environment that unifies provisioning, configuration and virtualization management with application configuration into a single web-services-based framework. By integrating this flexible, powerful framework with management of resources and policies, UniCloud 2.0 greatly simplifies the deployment and operation of both physical and virtual (i.e. 'dual-mode') compute infrastructures. UniCloud 2.0 integrates a policy engine, Sun Grid Engine software and a powerful infrastructure provisioning framework to dynamically add virtual or physical compute resources to the cluster infrastructure, automatically delivering real-time resource optimization based on available memory, licenses, power consumption, CPUs and even data locality.

Key Features and Capabilities

UniCloud is the only available product that integrates the key capabilities and technologies needed to operate in all cloud environments:

- **Public clouds:** UniCloud supports Cloud Clustering so uses can provision and scale capacity in a public cloud environment such as Amazon EC2 or Rackspace
- **Hybrid clouds:** UniCloud users can cloud-burst by adding virtual compute nodes to internal clusters by provisioning nodes in a public cloud
- **Private clouds:** UniCloud creates an internal cloud that uses policies to place jobs on the most appropriate infrastructure, live-migrate or checkpoint jobs, and add virtual compute nodes by cloudbursting

Simultaneous Dual-Mode Support

UniCloud 2.0 is the first cloud computing product to operate and support simultaneous dual-mode infrastructure, instead of requiring users to choose between deploying either physical or virtual cloud compute nodes. The built-in descriptive policy management ensures applications use the best available mode by switching the hardware profile or live-migrating workload as required to achieve service level objectives. This means all workloads and users get the fastest possible throughput and greatest possible utilization.

Simple to Use

UniCloud provides a single construct to manage complex infrastructures and workloads using service level objectives. Workload requiring expensive application licenses, or meeting other prescribed priorities, can be run immediately without having to restart current jobs – check-pointing and live-migration are fully supported, so all workload finishes within a predictable amount of time. Integrated policy management enables automation by harmonizing workload, resources and hardware profiles. Changing system behavior is as simple as publishing a policy – new actions instantly become available.

Imagine the Potential

UniCloud 2.0 allows any typical cluster administrative functions to be supported in a cloud environment and also supports many capabilities that are not typical or possible with incumbent solutions such as basic check-pointing. With UniCloud 2.0, users can place multiple applications safely on the same compute resource without worrying about swapping or application interference and can reduce power consumption significantly by shifting workload to less expensive data centers.

If you can think it, you can do it.

About Univa UD

Univa UD is a leading provider of cloud management software. Companies worldwide use our award-winning products to build and manage internal cloud environments, leverage public cloud services, and enable cloud service offerings for end customers. We offer the widest available range of production-ready private, public and hybrid cloud management products, including cloud infrastructure management and service governance. For over a decade, Univa products have delivered measurable business value to organizations of all kinds by reducing costs, increasing utilization, and optimizing the computing environment. Enterprises use our products to optimize internal technical and business computing, and service providers rely on Univa software to create and deliver their cloud-based offerings. With a focus on making business easier for our customers, Univa is advancing the vision and practice of cloud computing. Visit us at www.univaud.com.

What our customers are saying:

"The decision to use UniCloud was basically a no-brainer."

"Thanks to UniCloud, we're able to meet our peak computational demands without investing in new hardware."

"Without UniCloud, some of our most advanced research would simply not be feasible."

"We're getting exactly what we need. We pay for HPC power only when we use it, using a cluster management system that's easy to use."

"UniCloud minimizes both our initial and long-term investments in HPC."

Read our newest case studies at: www.univaud.com/about/resources/

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