

CYCLECLOUD™

Making clouds productive

Cycle Computing's CycleCloud software suite is the leading cloud orchestration, provisioning, and data management platform for Big Compute, Big Data, and large technical computing applications running on any public, private, or internal environment.

For years, customers in Life Sciences, Manufacturing, Financial Services, and other Engineering and Research areas have used CycleCloud software to manage some of the world's largest production cloud deployments. The ever-increasing demand for support of compute and data intensive workloads, machine learning, genomics, data collection, analytics, and simulation is causing many organizations to struggle to meet the needs of their users.

While it is easy to get a cloud server up and running, it is only productive once a full cloud workflow is created. Overall management, control, and efficiency of the workflow can be a challenge.

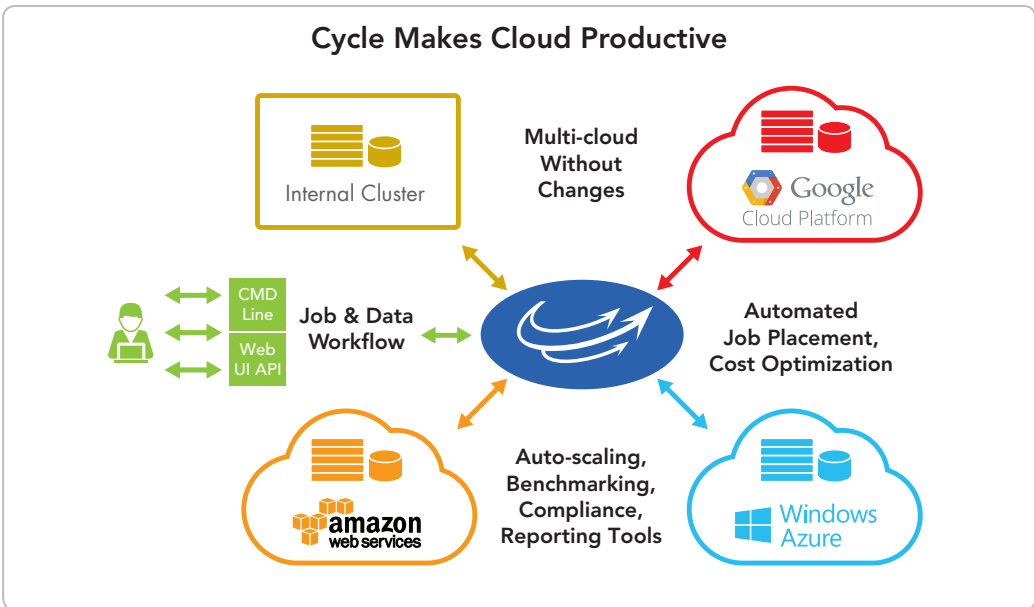
These challenges include:

- Having the ability to exploit unlimited compute capacity, but needing assistance to exploit it effectively.
- Optimizing and managing multiple cloud providers, especially given the various platforms they each provide.
- Security concerns about workloads and data in public clouds.

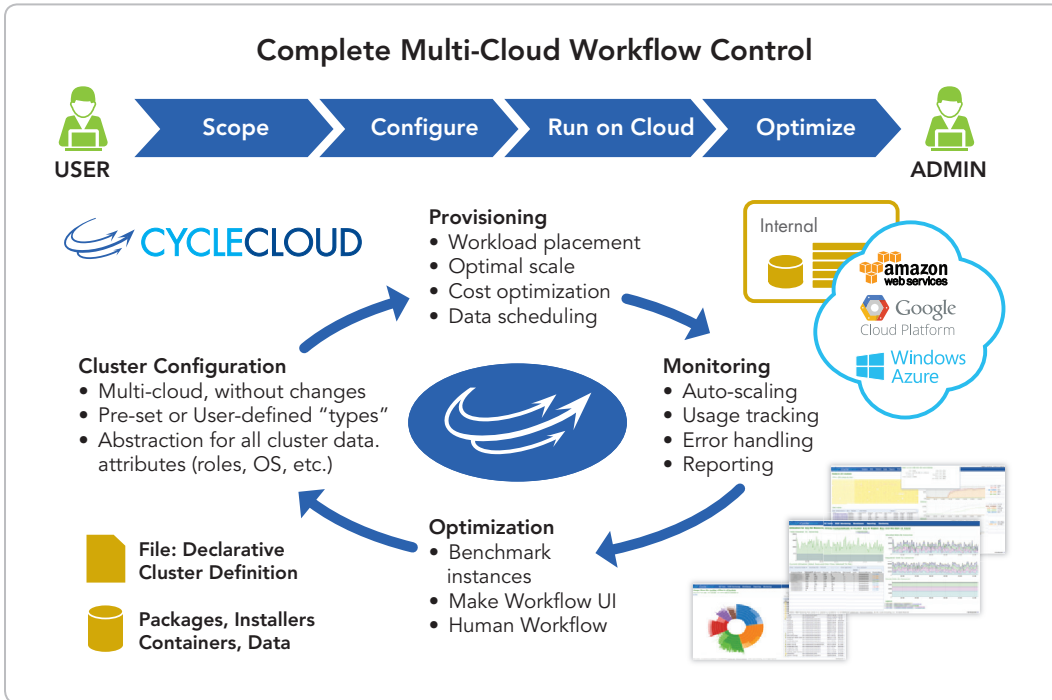
Running multiple workflows without tools can quickly become overwhelming. Leveraging the CycleCloud tool suite solves these issues plus more for users, system administrators and management, while delivering the maximum

CycleCloud makes it possible to deliver:

- Zero queue times
- Unlimited amounts of a wide variety of architectures
- Compute that fit jobs budget/value instead of available capacity
- Dynamically adjustable infrastructure to service a broad range of applications
- Capacity that matches spending to actual consumption cluster



Complete Multi-Cloud Workflow Control



Capabilities include:

- ▣ Provision, manage, and orchestrate cloud infrastructure from multiple providers
- ▣ Automated and efficient data placement and management
- ▣ Full-featured web GUI , command line tools, and APIs
- ▣ Purpose-built, cloud-optimized, configuration management system
- ▣ Dynamic scaling of large computation, Big Data, Big Compute and HPC workloads
- ▣ Job submission, monitoring and administration of cloud deployment

KEY FEATURES

CycleCloud is engineered for enterprise-class deployments and manages secure, large-scale, cloud environments for some of the world's largest organizations. This has made CycleCloud:

- **Resilient.** Leveraging template-based, provider-agnostic infrastructure definitions, CycleCloud provisions and synchronizes your infrastructure in another data center, or even another cloud provider.
- **Secure.** CycleCloud leverages cloud provider-specific security mechanisms to control network, compute, and storage access. It can directly integrate with on premise authentication/authorization systems such as LDAP and Active Directory, and offers API-level integration for a host of other configurations.
- **Scalable.** CycleCloud can handle any scale, from tens to thousands of servers, from MB to PB of data.

- **Flexible.** CycleCloud's configuration management provisions the entire software stack including leading operating systems, HPC, HTC, and storage configurations. It is fully customizable allowing you to incorporate unique machine images and custom Chef cook-books.

CycleCloud manages cloud infrastructure provisioning, workflow orchestration, programmatic data placement, full process monitoring and logging, all within a secure process flow. It supports multi-cloud environments moving between internal clusters, AWS, Google Cloud Platform, Microsoft Azure and others. CycleCloud provides a web-based GUI, a CLI, and a set of APIs to define cloud-based clusters according to policies set by Sys Admins. It can auto-scale these clusters by instance types, cluster size, and costing parameters, rapidly deploying everything from modest sized systems of 64-6,400 cores to systems that rank as some of the fastest computers in the world (156,000+ cores), while validating each piece of the infrastructure to insure a complete and robust environment.

Cycle Computing™ accelerates innovation by providing simple, managed access to Big Compute. Our software makes cloud computation productive by orchestrating workflows, managing data, balancing providers, and enabling users in a secure, controlled way.

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