

Features:

- AWS, Azure, Google Cloud, Oracle Cloud, and Open Telekom Cloud are preconfigured and built in to the GUI (and CLI) with deployment-ready access.
- Supports Linux and Windows environments.
- Control cloud costs by automatically shutting down nodes when not in use. (Automated deployment and release of nodes.)
- Comprehensive management across the following environments:
 - Public Cloud
 - Private Cloud
 - Containers
 - Virtualized
- Spin up an unlimited number of nodes in the same amount of time as it takes to spin up one.
- Configure stacks, run test jobs, run custom jobs, run jobs on any major cloud provider, and view job output from a single interface.
- Shared Clusters: Collaborate and share clusters across multiple users with only one set of cloud credentials.

Overview

Adaptive Computing's On-Demand Data Center™ (ODDC) provides a scalable cloud systems management platform that gives companies the ability to leverage public cloud provider resources, with no lock-in to any major cloud provider.

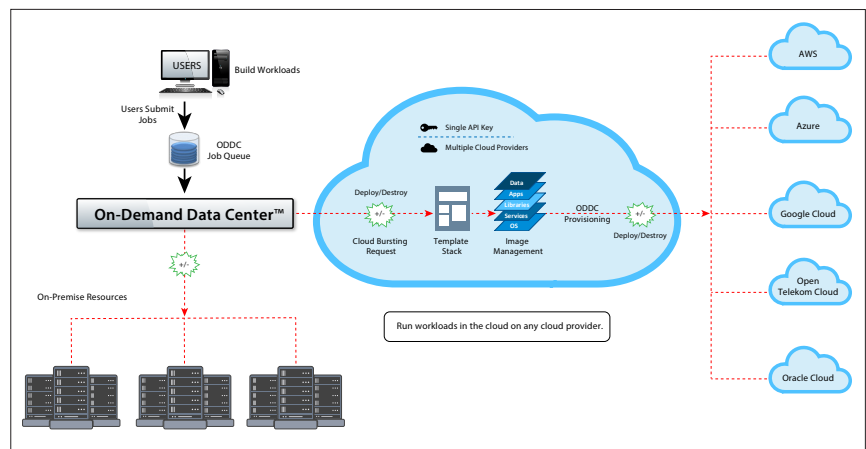
The ODDC is used to spin up temporary or persistent data center infrastructure resources quickly, inexpensively, and on-demand. This enterprise-grade platform can be used to automatically deploy and build clusters in the Cloud, automatically run applications on those clusters, and then terminate the cloud resources, assuring that you only pay for what is being used.

Deploying cloud-hosted resources on any of the leading cloud providers becomes much easier than going directly through a cloud provider console because access is preconfigured and built into the GUI (and CLI) of the ODDC.

This simplified accessibility eliminates the complexities of running workloads or applications in the Cloud. AWS, Google Cloud, Oracle Cloud, Azure, and Open Telekom Cloud are available through one single interface. Run jobs on any cloud provider or switch between them with a click.

The ODDC functions as an operating system for the cloud. Just like an operating system is an abstraction layer for a hardware platform, the ODDC is an abstraction layer for cloud platforms. This highly flexible and intelligent cloud management platform enables seamless access to all compute resources, whether on-premise or in the Cloud.

Organizations developing in-house cloud access systems often run into limitations and setbacks. The ODDC is uniquely valuable in that it provides an easy avenue for cloud adoption and requires no cloud expertise to use. Cloud resources can be intelligently managed and automated so that they can be used effectively and efficiently.



The On-Demand Data Center gives immediate access to all on-premise as well as cloud compute resources.

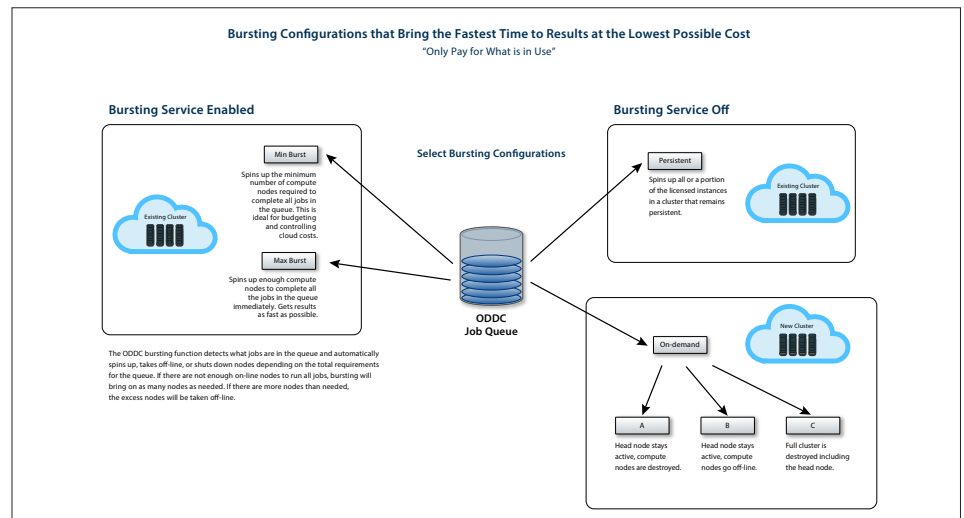
Features (cont'd):

- Enhanced file management and job output.
- Access specialized resources such as GPUs and large instance sizes.
- Move across clouds easily and switch between them with a click.
- Works with any job scheduler or without a workload scheduler.
- Manage homogeneous and heterogeneous clusters.
- Cloud bursting configurations bring the fastest time to results at the lowest possible cost.
- Admins can set up user accounts allowing for cloud cost control and access control.
- Flexible pricing and licensing models.
- Using the ODDC destroy cluster command assures there are no orphan artifacts left in the cloud provider.
- Cloud multi-node jobs are allocated on optimal resources without administrators micromanaging the process.
- The ODDC supports on-premise, multi-cloud, corporate cloud, and edge computing.

Cloud Bursting

The ODDC enables on-premise systems to 'burst' workload backlog to an external public cloud when resources are not sufficient to accommodate peaks in demand. All required workload resources are automatically deployed as needed. When the workload backlog has completed, the cloud resources are automatically deprovisioned from the cloud provider.

This added flexibility enables admins to expand their own cluster and dynamically utilize the scalability of the cloud. The ODDC includes all the necessary tools to facilitate 'bursting' workloads and applications to the cloud to extend on-premise resources. Cloud Bursting can be set up to deploy applications dynamically or on-demand.



Bursting Configurations that bring the fastest time to results at the lowest possible cost.

Automated Infrastructure Provisioning

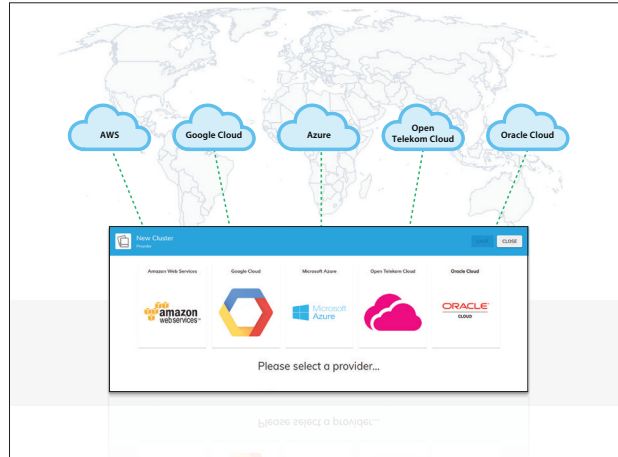
Automatically deploy and build clusters in the Cloud, avoiding an up-front investment in an expensive hardware purchase and installation. Expand your data center without needing additional floor space, air conditioning, power, or personnel. Use scripted components to automate and reduce manual processes. Automatically take unused capacity offline and save on costs.

Application Deployment and Portability

Deliver your applications to any private or public cloud. As modern businesses adapt and prepare for tomorrow's challenges, making applications portable is a competitive advantage. Moving legacy applications to a modern cloud infrastructure allows companies to easily and cost-effectively maintain existing enterprise applications that run the business. Cloud integration features within the ODDC help organizations gracefully migrate workloads without disrupting mission-critical operations. The ODDC smoothly runs applications in public clouds, without the application owner requiring any knowledge of the Cloud.

Benefits:

- Teams can automatically deploy and build clusters in the cloud, automatically run applications on those clusters, and then terminate the cloud resources on a daily, weekly, or even hourly basis.
- Reduce your costs by spreading your tech infrastructure across multiple cloud providers and/or on-premise infrastructure based on cost of delivery.
- Optimize productivity by taking advantage of automation.
- Improve management by providing controls for one-off projects with contractors.
- Provide a single point of control for provisioning and deprovisioning infrastructure resources.
- Extend your on-premise resources to the cloud to meet peak demand or eliminate backlog.
- Reduce the costs of allocating temporary resources or making additional hardware purchases.
- Get true scalability and elasticity.
- Increase the capacity of your on-premise data center, access advanced computing power, and gain virtually unlimited capacity.
- Prevent cloud vendor lock-in; easy to use, manage, and configure.



Preconfigured connections to the major cloud service providers are built into the multi-cloud interface.

Auto-Deploy CI/CD Pipelines

The ODDC improves CI/CD by enabling automation at any part of the pipeline and can be enabled quickly to handle a new pipeline with ease. This is especially useful for automation testing. Developers can deploy different SDLC toolchain combinations using the ODDC platform.

Cost-Effective Automation Testing

The ODDC platform allows developers to test on a large variety of high-performance machines and specific environments, saving organizations time and money by not using expensive resources in-house for testing. When large development teams test, having dedicated resources in refreshed cloud environments is a competitive advantage. The ODDC shuts down active cloud resources when not in use, preventing escalating and unnecessary cloud costs. When large teams of developers are using cloud resources for testing, this can add up to a significant cost savings.

Deliver Hybrid IT or A Pure Cloud Solution

Balance workloads between on-premise and cloud infrastructures. Deliver Hybrid IT by spreading your tech infrastructure across different cloud providers and on-premise infrastructure.

- **As a Hybrid Solution:** Run your on-premise workload backlog in the Cloud using the ODDC. Organizations can achieve a true 'hybrid cloud' experience and expand their on-premise resources by 'bursting' their workload backlog to the cloud, eliminating long wait times in job queues and providing a better end-user experience.
- **As a Pure Cloud Solution:** Run multiple application types (including new requirements, like AI requirements) in the Cloud using the ODDC.

Benefits (cont'd):

- *Solve cloud migration challenges; highly flexible and customizable.*
- *Intelligently manage cloud resources so that they can be used cost-effectively and efficiently.*
- *Increase productivity and accelerate time to results while reducing Cap Ex costs.*
- *Scalability and the immediate availability of resources; instantly launch or scale up infrastructure.*
- *Disaster Recovery is free - reuse scripts to build standard components.*
- *Users without technical knowledge can set up temporary or persistent cloud resources quickly.*
- *Schedule and orchestrate both HPC and Enterprise workloads.*
- *Embedded Application: The solution can be embedded into an existing application interface to run the application in the cloud.*
- *Studies have shown that by matching the instance type to the workload requirements, there is a 65% reduction in workload time to-complete using the ODDC.*

Composable Infrastructure

With the ODDC, users can select infrastructure resources in the Cloud on a case-by-case basis to meet specific workload requirements. Select custom infrastructure components such as CPUs, GPUs, size of memory, storage and type of network. Choosing these components separately allows for unlimited infrastructure configuration options. This is ideal for matching cloud resources to specific requirements of certain workloads.

Stacks and Deployment Images

The ODDC permits users to define all stack components that allow applications to be run in the Cloud. The ODDC takes those definitions and automatically builds the deployment image needed to run the workload in the cloud. The ODDC allows the same job script to be used on premise and in the cloud.

5 Key Components of the ODDC

- **Application:** Deliver your applications to any private or public cloud. Make applications completely portable between on premise and cloud infrastructures as well as from one cloud to another.
- **Data:** Data can be externalized from applications. The ODDC will either include the data in the stack or point to the data with the "data location" field in the stack.
- **Compute:** The operating system, instance type, size and vCPU may be selected prior to running your workload. Match your compute requirements to your individual workloads.
- **Network:** Cloud provider network configuration as well as support for InfiniBand connectivity between all nodes.
- **Storage:** Accessibility to high-speed cloud storage like Amazon S3. Share data between compute nodes via NFS or BeeGFS.

Cost Control

Automatically deprovisioning cloud resources when no longer needed reduces public cloud usage hours by 40-50%, therefore saving cloud costs. Use the Cost Comparison Guide below to calculate your own potential savings.

- **Cost Comparison Guide:** <https://adaptivecomputing.com/cherry-services/cost-comparison-persistent-vs-on-demand-data-center/>

About Adaptive Computing

Adaptive Computing is a trusted leader in High-Performance Computing and Enterprise Software, providing advanced applications and tools to some of the world's largest computing installations. Our experience is earned from more than a decade of solving IT management challenges in the most scale-intensive and complex environments in the world and as pioneers in the high-performance computing (HPC) and cloud computing revolutions. Our mission is to help organizations to enhance performance, improve efficiency and reduce costs.

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