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COMPUTE CLOUD SERVICE

Move to Your Private Data Center in the Cloud
Zero CapEx. Predictable OpEx. Full Control.

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About the Service

The problem. You run multiple data centers with hundreds of servers hosting diverse workloads. The servers are of a dizzying array of hardware specs and configurations. Your data centers contain networking and storage devices accumulated over the years from too many vendors to keep track of. You pay an army of engineers to keep everything in your data centers humming day in and day out. Your OpEx budget is shrinking by the month. Your business users want more IT power every day. CapEx approvals are hard to get, even for replacing end-of-life hardware and software. Still you must consistently meet (and beat) cost, performance, and availability goals.

If this problem sounds familiar, then perhaps you've considered migrating to the public cloud.

The constraints. What's stopping you from moving right away to the public cloud?

- First, you want to be able to continue to use all those software licenses you've purchased over the years.

- Second, you want your applications and data to continue to be secure and isolated.

- Finally, although you're attracted by the financial efficiency of the public cloud, you want to retain control over how your IT resources are deployed.

The solution. Subscribe to Oracle Compute Cloud Service, a secure, reliable, low-cost, standards-based infrastructure service.

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Set Up Your Site

Subscribe to Oracle Compute Cloud Service, and easily launch and manage virtual machines running operating systems of your choice, with all the necessary storage resources and network settings. Scale your topology up and down based on your business needs.

Don't want noisy neighbors in the public cloud? Opt for dedicated capacity in Oracle Compute Cloud Service. You get an environment that's physically isolated from other tenants in the cloud, and you experience predictable performance—all this while you continue to enjoy the agility and flexibility of the cloud. It's like having your own private space in the public cloud!

Rapid provisioning. Easily create as many virtual machines (VMs) as you want with the necessary storage and networking resources, and run all of your applications on the VMs. Manage and scale your VM topology in the cloud with a few clicks of the mouse.

Maximum flexibility and full control. By migrating your on-premises applications to Oracle Compute Cloud Service VMs, you can take advantage of the elastic compute, storage, and network capabilities of the service.

And if you opt for dedicated capacity, then you're the **only tenant** on a site. You enjoy predictable performance, full control, and complete network isolation in the public cloud.

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Size Your VMs

When you create VMs in Oracle Compute Cloud Service, you can pick CPU and memory resources for your VMs from a range of *shapes*, each of which is a carefully designed combination of processor and memory limits.

So what's a shape? It defines the number of *Oracle Compute Units (OCPUs)* and the amount of RAM available for a VM. An OCPU provides CPU capacity equivalent to one physical core of a modern Intel Xeon processor with hyperthreading enabled.

A wide range of shapes is available to help you select the combination of compute power and memory for your VMs that best suits your business requirements.

When you select a shape for your VM, consider the nature of applications that you'll deploy on the VM, the number of users that you expect to use the applications, and how you expect the load to scale in the future. Remember to also factor in the CPU and memory resources that will be consumed by the operating system running on the VM.

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Choose Your Image

Use Oracle-provided machine images. Quickly create robust VMs using one of several, ready-to-use Oracle-provided machine images. These images are virtual disk templates of a specific size and with a specific operating system installed on them. You can choose from two types of images:

- Fully loaded images containing the essential packages for app development.

- Lean images containing just the minimum packages for you to quickly launch instances and then customize the operating system according to your needs.
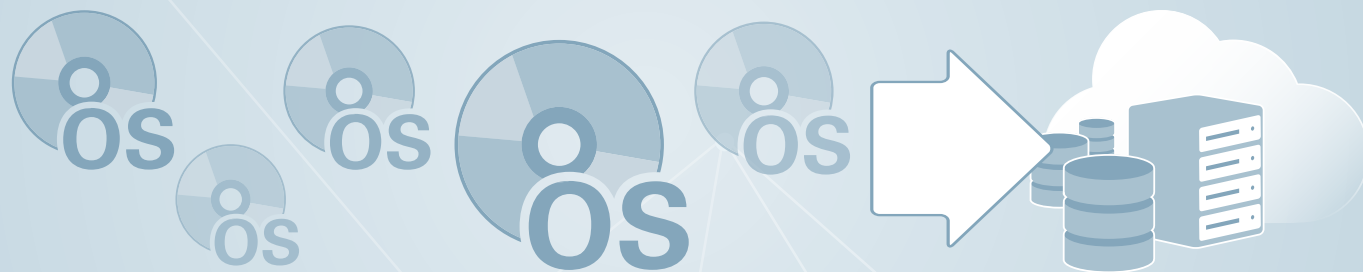
Bring your own images. If you want to, build custom machine images based on the operating system, applications, and disk size of your choice and use those images to create VMs. Note that the operating system and software that you use to build you own machine images must have the required licenses. You are responsible for purchasing the licenses and support for running any third-party operating system and software on Oracle Compute Cloud Service.

When you build your own machine image:

- Plan the packages that you want to include in your images, keeping in mind the workload that you want to deploy.

- Keep the image disk size as small as possible. Large images take more time to upload to Oracle Cloud, cost more to store, and take more time to provision instances from.

- Add any users that you'd like to be available on the instances created using your image.

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Organize Storage

For each of your VMs, you can provide up to 20TB of block storage for storing data and applications, by creating up to 10 persistent *storage volumes* and attaching them to the VMs. When you create a storage volume, you can specify the capacity that you need—from 1 GB all the way up to 2TB. You can attach storage volumes to VMs either when you create the VMs or later.

After creating a VM, you can scale up or scale down the block storage capacity for the VM by attaching or detaching storage volumes. Even after you delete VMs, the data stored in the storage volumes remains intact until you delete the volume.

While creating a VM, you can opt to boot from a persistent boot volume, ensuring that any changes that you make to the boot disk persist when the VM is re-created.

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Design Your Network

Exercise fine-grained control over network access to your VMs—from hosts outside Oracle Cloud, as well as from other VMs in your Oracle Compute Cloud Service account. You can also control traffic to and from VMs over specific protocols and ports that you define. In addition, for a VM that requires access to the Internet, you can reserve and use a static public IP address.

Set up firewalls. Quickly enable unrestricted communication among selected VMs by creating a *security list* and adding your VMs to it. VMs in a security list can communicate with all the other VMs in the same security list over any protocol and port.

Open ports. By default, the VMs in a security list are isolated from hosts outside the security list. To override this default access restriction, you can create *security rules*. Each rule that you create defines a protocol-port combination over which you permit traffic to a security list from the specified source.

Control access. At any time, to block access—permanently or temporarily—to all VMs in a security list, delete or disable the relevant security rules. To block access to specific VMs rather than to the entire security list, remove those VMs from the security list.

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Automate Resource Management

Easily launch and manage multiple VMs and their storage and networking resources by using *orchestrations*. An orchestration defines the attributes and interdependencies of a collection of VMs and their networking and storage resources. After you create an orchestration, upload it to Oracle Compute Cloud Service. Then start it to create all of the resources defined in the orchestration in one action! When you don't need a set of resources any more, delete them all in a single action by stopping the orchestration that defines those resources.

To ensure high availability (HA) of your VMs, set the HA policy in the orchestration to *active*. When a VM or the underlying physical server goes down for any reason, the VM is re-created automatically.

Use orchestrations to automate the provisioning and lifecycle operations of an entire virtual compute topology. For example, you can use orchestrations to manage a collection of VMs running a multitiered application stack with all the necessary networking, storage, and security settings. To help you get started, Oracle gives you a set of orchestration samples that you can customize based on your resource needs.

Define the orchestration.
Specify the attributes of your instances and the related networking and storage resources in a JSON-formatted file.

Upload the orchestration.
Upload the orchestration to Oracle Compute Cloud Service.

Manage the life cycle of the resources.
When required, stop the orchestration to remove all the resources and start it again to re-create your resources.

Provision all the resources.
To create all the resources defined in the orchestration, just start the orchestration.

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Get Started
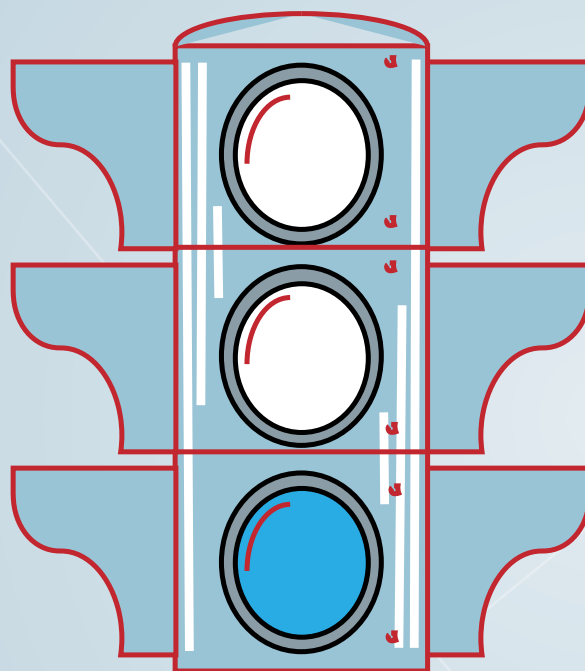
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