ORACLE

Understanding Oracle Cloud VMware Solution

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Public

Purpose statement

Oracle Cloud VMware Solution (OCVS) provides a customer managed, native VMware-based cloud environment, installed within a customer's tenancy. It offers complete control using familiar VMware tools. Customers can easily move or extend VMware-based environments to the cloud without rearchitecting applications or retooling operations. This document addresses the challenges of deploying VMware environments in the public cloud, the benefits of Oracle's solution, its competitive advantages against similar solutions from other cloud vendors, and its use cases.

Disclaimer

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The challenge of VMware-based environments in the public cloud

The VMware Software Defined Data Center is a mission-critical platform for many enterprise IT Infrastructure environments. This infrastructure remains strategic even within broader cloud transformation strategies.

Leveraging the public cloud for on-premises virtualized applications and workloads is, in general, a challenging task. This is true whether companies are migrating entire data centers, expanding on-premises capacity and creating hybrid cloud deployments, or leveraging the public cloud for disaster recovery. Companies must be able to control and manage their existing infrastructure and operations even as they make use of public cloud capabilities.

Oracle Cloud VMware Solution is a fully customer-controlled and customer-operated VMware environment that is provisioned on Oracle Cloud Infrastructure. Oracle Cloud VMware Solution enables enterprise customers to migrate their VMware environments to the public cloud at a global scale, using existing practices for IT operations, and in a secure manner.

Meeting customer needs for control, availability, and support

Other cloud vendors implemented a shortcut to VMware environments with non-integrated managed or hosted solutions, but that approach limits capabilities. It has caused enterprise customers to hold back from migrating their virtualized environment to the cloud. Enterprise customers report that there are three main areas preventing them from moving their VMware environments to the cloud:

- **Predictable Costs:** On-premises data center costs for VMware environments are well known to Infrastructure administrators. Published, globally consistent costs for operations, data ingress and ingress are very important for ongoing budget management.
- **Control and security:** Customers want full control to secure their environment. They also want assurances that unauthorized parties, including cloud providers, can't access their data, view their configurations, or control their operations.
- **Global availability:** The world's largest companies operate at a global scale. They require IT infrastructure resources to be physically close to their global users. No compromises.
- **Enterprise technical support:** Cloud vendors must provide a single point of contact for all customer issues to facilitate quick and efficient resolution.

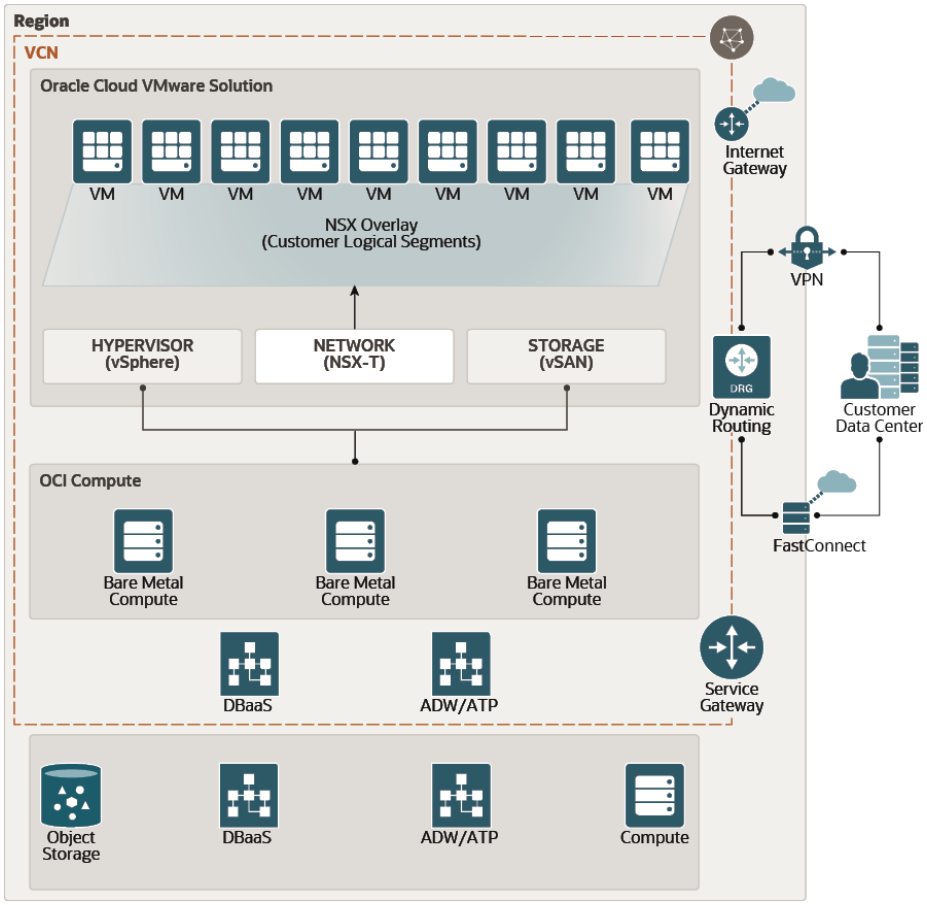
Oracle's Larry Ellison and VMware's Pat Gelsinger

Two industry leaders discuss how customers will benefit from running VMware on Oracle Cloud Infrastructure.

Watch the video (4:29)

"Now our clients have yet another option to help quickly move Oracle workloads to Oracle Cloud Infrastructure through the simplicity of tools like vMotion. What's more, because this is a customer-managed service, we can move forward with patching, upgrading, and maintenance of the VMware estate on our clients' terms. That's huge."

Chris Pasternak
Accenture Global Oracle Cloud Infrastructure Lead



Benefits of Oracle Cloud VMware solution

Run VMware environments natively on Oracle Cloud

Migrate VMware estate

Oracle Cloud VMware Solution allows customers to migrate VMware environments to Oracle Cloud, without having to modify VMware-based applications. Customers gain scale and agility while maintaining continuity with existing VMware-based tools, processes, and policies.

Innovate at the right pace

Migrate applications now without having to make changes, and use Oracle Cloud solutions, based on technologies like Kubernetes, Kafka, and Spark to modernize your applications later.

Run production applications in the cloud

Oracle Cloud VMware Solution is built for enterprise applications certified on VMware running on Intel Skylake processors, including applications from Oracle and other enterprise platforms.

"The Oracle VMware Solution can offer our clients a path to cloud that incorporates the flexibility to build and manage a full featured VMware offering that runs on Oracle's second-generation cloud infrastructure."

Jeffrey Davis
Chief Commercial Officer, Oracle Business, Deloitte Consulting LLP

"Customers can now leverage a single solution for data protection, recovery, monitoring, and ransomware protection for any app and any data in any cloud."

Dan Kogan
Vice President Product and Solutions Marketing at Veeam

"Oracle Cloud VMware Solution is offering increased control, flexibility, and cloud integration that the industry is looking for."

Gil Levonai
CMO and Senior Vice President of Product, Zerto

Disaster recovery where needed

Oracle Cloud VMware Solution is deployable into all commercial (non-government) Oracle Cloud Regions, and Oracle Dedicated Region Cloud@Customer. Replicate or backup anywhere, anytime.

Dedicated environment with full control

Complete control over the cloud stack

Oracle Cloud VMware Solution provides customers self-service provisioning with full administrative permissions including root access. Root access provides complete control over the entire hardware and software environment.

Isolated and dedicated

Oracle Cloud VMware Solution is a single-tenant solution, perfect for customers whose workloads demand isolated infrastructure and wish to avoid the resource contention found in competitive, multitenant environments.

Security-first architecture

Reduce risks with Oracle Cloud's security-first design architecture that utilizes built-in tenant isolation, least privilege access, and data encryption at rest. With Oracle Cloud VMware Solution, there are no 'managed service' security implications to consider, and access is private and entirely under a company's control.

Use the same VMware tools

Maintain investment in third-party tools

Oracle Cloud VMware Solution allows VMware administrators to use all of the orchestration, management, monitoring and other tools in the VMware ecosystem.

Familiar application management

VMware-based applications running on premises can be managed the same way on Oracle Cloud—using a single, integrated view.

No retraining required

Leverage existing skill sets with tools already being used on-premises, including vSphere, vCenter, vSAN, and NSX.

Seamless cloud migration

Extend tested and proven on-premises IT deployment architectures and processes. Configure the cloud environment to match on-premises and keep them in-sync.

Leverage VMware best practices

Rely on VMware best practices with native tool integration and minimize disruption when moving to the cloud.

Regional Availability

North America

- US East (Ashburn)
- US West (Phoenix)
- US West (San Jose)
- Canada Southeast (Toronto)
- Canada Southeast (Montreal)

LAD

- Brazil East (Sao Paulo)
- Chile Central (Santiago)

Government Cloud

- US Gov East (Ashburn)
- US Gov West (Phoenix)

EMEA

- UK South (London)
- UK West (Newport)
- Germany Central (Frankfurt)
- Switzerland North (Zurich)
- Netherlands Northwest (Amsterdam)
- Saudi Arabia West (Jeddah)
- UAE East (Dubai)

APAC

- Japan East (Tokyo)
- Japan Central (Osaka)
- South Korea Central (Seoul)
- South Korea North (Chuncheon)
- Australia East (Sydney)
- Australia Southeast (Melbourne)
- India West (Mumbai)
- India South (Hyderabad)

Ease of operations

Avoid modifying applications

Rely on a single VMware specification that works both on premises and in the cloud. Avoid effort spent porting applications, refactoring code, or resolving configuration differences.

Rely on native VMware tools

Use the native VMware tools already familiar to a business to manage infrastructure and migration needs, minimizing organizational impact.

Leverage existing skill sets

Minimize change and impact on workforce—Oracle Cloud VMware Solution is designed to work with an existing VMware skill set and tooling.

Leverage adjacent Oracle Cloud services

Containers and microservices

Modernize parts or all application stacks with native access to Container Engine for Kubernetes and Oracle Functions.

Cloud database management

Increase service levels and reduce overhead with a broad array of cloud databases such as Oracle Exadata, Autonomous Data Warehouse, Autonomous Transaction Processing, Oracle NoSQL Database, and more.

Business analytics and data science

Easily provide robust business analytics and data science capabilities while leveraging the latest bare metal or virtual machine (VM) GPUs.

Flexible and powerful compute

Tackle general applications with new E3 flexible shapes, where customers specify the exact number of cores desired, from 1-64 OCPUs. Handle the highest performance workloads with the most powerful Intel, AMD, and NVIDIA-based bare metal machines available.

Networking and connectivity

Fast, reliable, and secure networking for performance-sensitive applications such as online transaction processing (OLTP), high-performance computing (HPC), and real-time streaming. Low-cost private connectivity to facilities with FastConnect.

Examples of adjacent Oracle Cloud services:

Analytics: Analytics Cloud, Big Data Service, and more

Application Development: API Gateway, Container Engine for Kubernetes

Applied Software Technologies: AI, Blockchain, Data Science

Compute: Virtual Machine, Bare Metal, GPU, High Performance (HPC)

Database: Autonomous Database, Exadata, MySQL Database Service

Integration: Application Integration, Data Integration

Observability and Management: Application Performance Monitoring, Logging, Operations Insights

Networking: DNS, Email Delivery, FastConnect

Security: Cloud Security Access Broker (CASB), Cloud Guard, Identity and Access Management

Storage: Archive, Block, File, Object, Local NVMe SSD

Block, object, file, and NVMe storage

Efficiently address all storage needs with cloud-based block, object, file, archive, and local NVMe storage. Migrate with Data Transfer Appliance.

High-performance, elastic, and certified

Powerful bare metal hardware

Oracle Cloud VMware Solution's bare metal compute instances provide customers with 156 cores, the highest CPU core count available for any VMware-based solution in the market today.

High-speed virtual cloud network

Oracle virtual cloud networks (VCN) provide a customizable and private network just like a traditional data center network. Easily access adjacent Oracle Cloud Infrastructure Cloud services from the Oracle Cloud VMware Solution environment.

Elastic capacity

Scale large VMware deployments from 3 nodes to the current VMware limit of 64 hosts to accommodate growth.

Designed, built, and supported by Oracle

Certified by VMware. VMware ecosystem compatible.

How Oracle Cloud VMware solution compares

What does the solution actually contain?

Oracle Cloud VMware Solutions is built around the VMware Cloud Foundation specification and is VMware Cloud Verified, working with VMware to ensure that Oracle's deployments align with their guidelines. But it also takes advantage of the strength of Oracle Cloud Infrastructure. An Oracle Cloud VMware Solution Software Defined Data Center (SDDC) has multiple nodes (a minimum of 3 bare metal hosts and a maximum of 64), each consisting of 52 OCPUs, 768 GB RAM, and 51.2 TB of high-speed NVMe storage. It is deployed as a vSAN cluster, and can be provisioned with both vCenter and NSX-T. All this provides customers with a fully formed, highly functional environment on which to deploy their critical workloads.

Find out what sets Oracle Cloud Infrastructure apart from other cloud vendors:

Explore the Console:

VMware solution comparison

Read the comparison between Oracle Cloud VMware Solution and other cloud VMware offerings in the market.

	ORACLE	AWS	AZURE	GCP
Features	NSX-T, vSphere, vSAN, vCenter, HCX	NSX-T, vSphere, vSAN, vCenter, HCX	NSX-T, vSphere, vSAN, vCenter, HCX	NSX-T, vSphere, vSAN, vCenter, HCX
Security (FedRAMP High, DISA, etc.)	Customer owns root credentials. Oracle doesn't have access to root credentials or metadata.	AWS retains root credentials and metadata perpetually.	Azure retains root credentials and metadata perpetually.	GCP retains root credentials and metadata perpetually.
Billing	Consolidated	Separate bills from AWS and VMware	Unspecified	Consolidated
Support	Oracle	VMware and AWS	Third-party support	Third-party support
Updates, patches, and upgrades	Customer controls when and whether to upgrade.	AWS controls and decides.	Azure controls and decides.	GCP controls and decides.
Availability	20 Oracle Cloud regions + Dedicated Region Cloud@ Customer	Limited to 17 AWS regions	Limited to 2 Azure regions	Limited to 2 GCP regions
Maximum hosts per SDDC	64	16	16	64
SDDC vCenter access	Full Administrator access	Restricted access	Restricted access	Restricted access

Data from October 2020

Authentic VMware environment

Oracle built Layer-2 network support into OCI's Virtual Cloud Network (VCN) to offer a true VMware environment. NativeLayer-2 capabilities in this overlay network work without the need for dedicated switches, racks, cages, or data centers. The Oracle solution includes overlay network that supports VMware "as-is" with Oracle Cloud Infrastructure's cloud scale and performance.

One of the main design goals of Oracle Cloud VMware Solution was to be "just VMware". The following figures compare two VMware environments as seen in vCenter, one on-premises and one provisioned in Oracle Cloud Infrastructure as an Oracle Cloud VMware Solution cluster. There are no differences between the 2 solutions. Customers of Oracle Cloud VMware Solution can easily deploy their operations, Virtual Machines, and processes on Oracle Cloud VMware Solution in exactly the same way that they deploy them on premises.

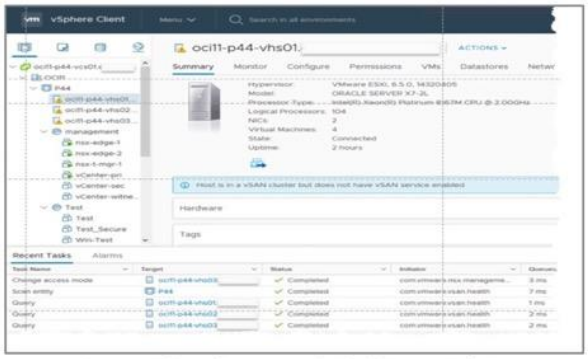


Figure A: vSphere Client on Oracle Cloud VMware Solution

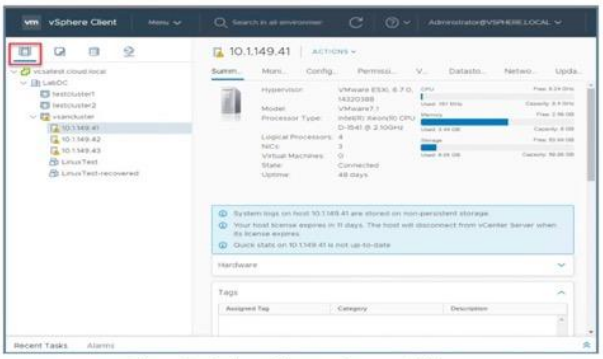


Figure B: vSphere Client on On-prem VMware

Not only is the user experience identical, but customers can also seamlessly migrate VMware operational best practices, patterns, and deployment methodologies to the cloud. customers can bring their existing tooling and operational best practices directly to the cloud without any time-consuming upskilling or reskilling requirements on their workforce.

Strong ecosystem

VMware Cloud Verified

Oracle Cloud VMware Solution is VMware Cloud Verified. The VMware Cloud Verified badge provides assurance that Oracle' services are compatible with the VMware Cloud Infrastructure.

Oracle Cloud VMware solution commercial regions

Oracle Cloud VMware Solution is available globally in all OCI commercial cloud regions, Dedicated Region Cloud@Customer, and Oracle Cloud Government Regions… including UK Public Sector.

Oracle Cloud VMware Solution lets customers keep their operations local to their business environment. And because it leverages Oracle Cloud Infrastructure second-generation architecture, Oracle Cloud VMware Solution will be available to customers in all future commercial regions around the world from their first day of operation.

Customer spotlight

Entel adopts Oracle Cloud VMware solution

"Entel migrated over 60 production applications to Oracle Cloud Infrastructure, including our mission-critical customer engagement, business intelligence, and risk management systems. We have a strong technical team, including many VMware experts, so a managed VMware service is not helpful. We need administrative access to the VMware software so we can maintain control of every aspect of the VMware environment. Oracle Cloud VMware Solution offers my team the exact same VMware experience they had in the data center but with cloud elasticity and access to Oracle Cloud services, providing a fast, easy, and cost-effective path to migrate our VMware-based applications to the cloud. As a result, performance has increased dramatically, and downtime is close to zero."

Helder Branco
Chief Technology Officer, Entel

Read the Innovation Spotlight

View the Entel customer success story

Oracle Cloud Partners

accenture

Deloitte.

VEEAM

Zerto

actifio

COMMVAULT

Rackware

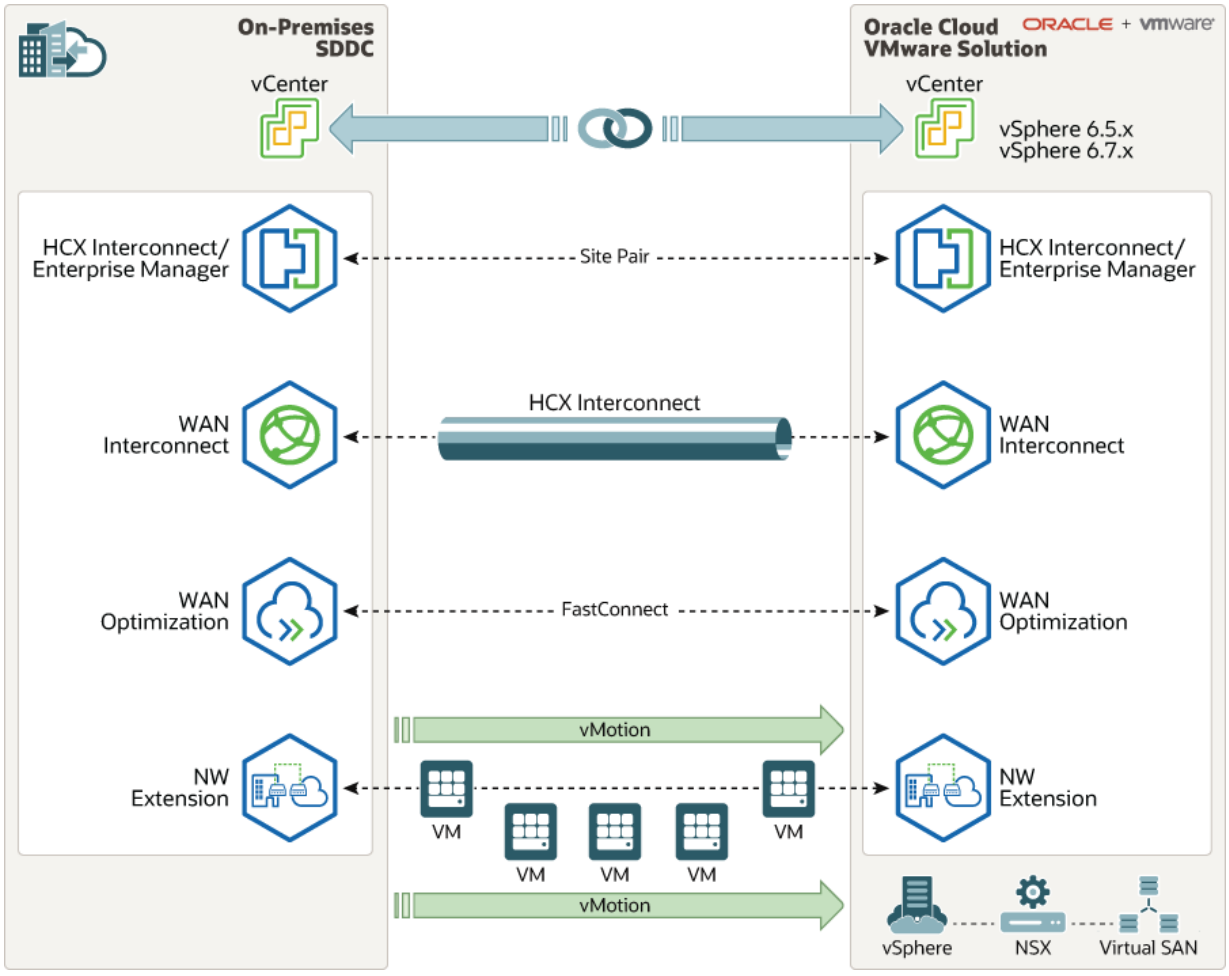
ORACLE

Use cases

Migrate VMware environments to the cloud

Migrate to the cloud—without compromising proven architectures and processes—while maintaining a single, integrated view to manage a cloud or hybrid environment.

Read the migration solution playbook



Hybrid cloud with native VMware tools

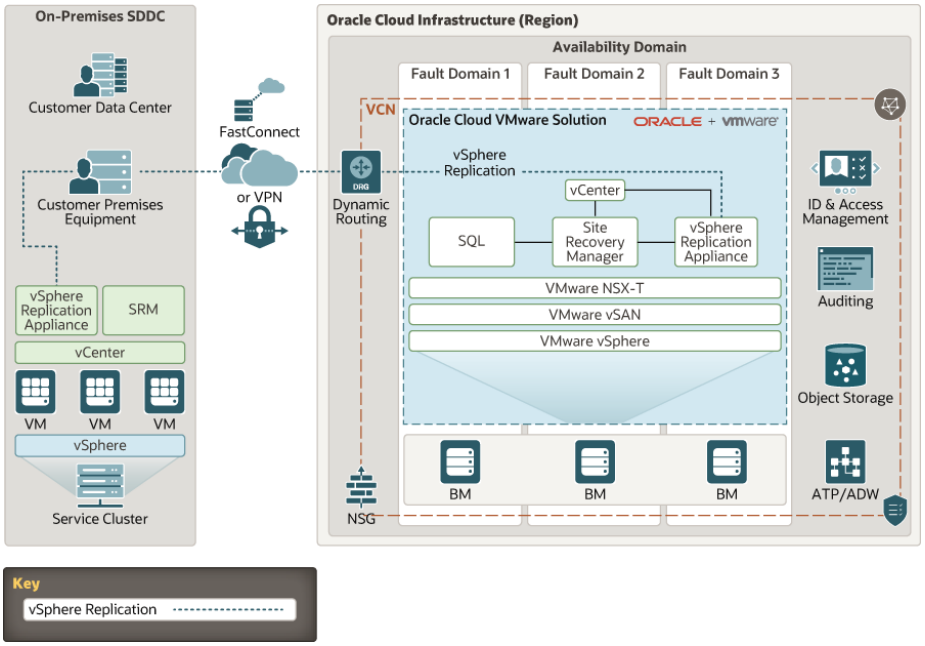
Gain capacity and flexibility with hybrid cloud by using familiar management and migration tools such as vCenter, ESXi, vSAN, and vMotion.

View the hybrid cloud solution playbook

Business continuity and disaster recovery

Gain resiliency for business continuity and disaster recovery with vSphere by bridging existing infrastructure to an alternate site on Oracle Cloud.

Read the disaster recovery solution playbook



Get started today

VMware-based infrastructure can now be a first-class citizen of the public cloud. Migrate entire data centers, expand capacity and extend existing data centers, and implement disaster recovery – all using existing VMware skills and operational capabilities. Take advantage of the power and flexibility of Oracle Cloud Infrastructure; move and improve VMware-based environments with OCI's cloud-native services.

Oracle Cloud VMware Solution can be provisioned within a few hours in any of Oracle Cloud Infrastructure's commercial regions and in customer Dedicated Region cloud instances.

- → Contact Oracle for more information
- → Learn more about Oracle Cloud VMware Solution
- → Learn more about Oracle Cloud Infrastructure
- → Try Oracle Cloud Free Tier

Getting started with Oracle Cloud VMware solution

Create a software-defined data center using familiar VMware tools.

See the demo (8:48)

Connect VMware with Oracle Cloud

Connect one or more physical locations such as a corporate headquarters or a remote branch office with Oracle Cloud.

Read the solution playbook

More solutions

- All solutions
- Deploy Oracle Cloud VMware Solution
- Connect to your Oracle Cloud VMware Solution
- Deploy Oracle Cloud VMware Solution in a hybrid configuration
- Migrate to Oracle Cloud VMware Solution
- Implement hybrid or cloud-to-cloud disaster recovery

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