



E-BOOK

Oracle Private Cloud Appliance

Accelerate Cloud Deployments with a Complete,
Converged Infrastructure



CONTENTS

- 02** Converged Infrastructure—
Powering a New Generation
of Enterprise IT
- 03** Faster Deployments and Greater
Flexibility—Introducing Oracle
Private Cloud Appliance
- 05** Simplify your Journey
to Cloud Computing
- 06** A Solution Built on Proven
Technologies and Best Practices
- 07** Oracle Private Cloud Appliance:
Driving Customer Success
- 09** Conclusion
- 11** Resources

INTRODUCTION

CONVERGED INFRASTRUCTURE— POWERING A NEW GENERATION OF ENTERPRISE IT

With the pace of change in today’s business environment accelerating so rapidly, datacenter agility and flexibility have become business critical. To succeed, modern businesses must be able to deploy innovative new applications and react to changes in market conditions at a moment’s notice. Because of this, an increasing number of companies are realizing the value of shifting to a Converged IT Infrastructure.

Converged Infrastructures deliver high levels of performance, increase automation, and simplify support in a fully optimized system that is engineered to reduce costs and turn a culture of IT maintenance into one of IT innovation.

IDC describes Converged Infrastructures as “Converged Systems” and “Integrated Infrastructure Systems” that consist of multiple pre-integrated subsystems such as server, networking, and storage sold as a single product. However, a general-purpose design

means they must support a wide range of workloads with different performance profiles.

Gartner’s definition refers to “Integrated Systems” and “Integrated Infrastructure Systems” as a class of data center systems that deliver a combination of servers, storage, and network devices in a pre-integrated and pre-optimized stack.

Oracle Engineered Systems are a super set of both Gartner and IDC’s definitions of converged infrastructure. They consist of pre-engineered and pre-assembled hardware and software bundles to simplify data center operations, drive down costs, and accelerate business innovation. Oracle has been at the forefront of the converged infrastructure market with Engineered Systems since 2008. Oracle Private Cloud Appliance, formerly Virtual Compute Appliance, is expanding the role of Engineered Systems to virtually any customer workload.

“With the Private Cloud Appliance, Oracle is competitive in both the rapidly evolving integrated systems marketplace by extending its red stack of hardware and software assets to enterprise and service provider customers via a packaged solution that is consistent from a deployment, management, and provisioning perspective. This initiative is furthering the industry’s focus on designing/evaluating systems based on an integrated systems model.”

Matthew Eastwood



CHAPTER ONE

FASTER DEPLOYMENTS AND GREATER FLEXIBILITY—INTRODUCING ORACLE PRIVATE CLOUD APPLIANCE

The Oracle Private Cloud Appliance, formerly Virtual Compute Appliance, is an integrated system designed for rapid application and cloud deployment. In addition to providing a single point of contact for support of the complete full stack, integrated solution, Oracle Private Cloud Appliance offers the flexibility of a general-purpose machine, the elasticity of cloud computing, and the ease of deployment and use of an integrated system.

The result is an unparalleled ability to go from a “bare metal” infrastructure to logging-in to a newly-deployed, running application within hours, instead of weeks or months.

Oracle Private Compute Appliance delivers:

- **A complete stack solution** integrating Oracle or third-party operating systems, Oracle VM, Oracle x86 servers, Oracle ZFS Storage Appliance, Oracle Virtual Networking, and Oracle Enterprise Manager
- **Converged Infrastructure control** for rapid configuration, management, and provisioning of all server, network, and storage resources
- **A unified, software-defined network fabric** allowing new networks to be dynamically added and existing networks to be modified without the need to manually modify cabling
- **Support for a wide variety of guest operating systems** including Microsoft Windows, Linux, and Oracle Solaris
- **Support for customer provided storage** from Oracle or existing storage from other vendors
- **Unified, secure management** with browser-based, at-a-glance visibility of all hardware components and secure, encrypted remote access

The Oracle Private Cloud Appliance also accelerates application stack deployment through support for Oracle VM Templates—pre-configured applications, middleware, and databases packaged as ready-to-run VMs that can be dynamically configured as they are deployed.

Customer Benefits with Oracle Private Cloud Appliance:

- **Turnkey cloud in a box at industry-leading price point**
 - **Simple path from on-premise to Oracle Cloud**
 - **Flexibility to run a range of workloads on one system**
 - **Saving hundreds of hours of installation and configuration time**
 - **Peace of mind with Oracle support to avoid multi-vendor escalation and finger-pointing**
-





CHAPTER TWO

SIMPLIFY YOUR JOURNEY TO CLOUD COMPUTING

Oracle Private Cloud Appliance is engineered to provide the ideal platform for building, managing, and deploying clouds, with Oracle Enterprise Manager to make cloud deployments faster and simpler to manage.

Oracle Enterprise Manager provides complete control of the entire cloud lifecycle— from planning, building, and deployment, to management, monitoring, and optimization.

When paired with the advanced virtualization capabilities of Oracle VM, this delivers a holistic cloud deployment and management solution across the entire enterprise.

Self-service provisioning and management of VMs, storage, and network resources makes Oracle Private Cloud Appliance perfect for delivering Infrastructure as a Service (IaaS). With policy-driven scaling, metering and chargeback, guided cloud setup, and advanced monitoring and management tools, you and your users have the highest level of control over IaaS deployments.

Oracle Private Cloud Appliance is fully equipped for IaaS straight out of the box, delivering:

- Performance and availability monitoring
- Fault detection and management
- Configuration and change management
- Gold-image based provisioning
- Policies for regulatory compliance and monitoring

Many of these features also lend themselves perfectly to Database as a Service (DBaaS) deployments. By utilizing the power of Oracle Private Cloud Appliance for DBaaS, cloud architects and database managers can consolidate deployments in the way that best suits them. Out of the box, Oracle Private Cloud Appliance provides database managers with:

- A consolidated platform for database provisioning
- Intelligent self-service provisioning
- Facilities to scale up, scale down, scale out, scale back or relocate database services
- Metrics for usage measurement

CHAPTER THREE

A SOLUTION BUILT ON PROVEN TECHNOLOGIES AND BEST PRACTICES

Oracle Private Cloud Appliance is built from innovative Oracle products that are proven and tested for enterprise deployments through multiple product generations, making it easy to use and implement in your environment. These proven solutions come together to form the building blocks of Oracle Private Cloud Appliance:

Oracle Private Cloud Appliance Controller software enables rapid infrastructure provisioning. The Controller software allows users to manage and monitor the systems hardware, perform software upgrades, create and manage virtual resources (virtual servers, virtual networks, and storage), and monitor utilization of all system resources in real-time.

Oracle Virtual Networking including Oracle Fabric Interconnect hardware and Oracle SDN software simplifies complex data center deployments with a wire-once solution and simple software-defined network configurations, resulting in:

- **Reduced** infrastructure complexity by **up to 70%**
- **Extremely low latency** and high bandwidth
- **Provisioning** new services and reconfiguring resources **in minutes, not days**

Oracle VM—the virtualization technology that powers more than 100,000 VMs for Oracle internal development and serves thousands of customers across a wide range of Oracle Cloud services.

Oracle VM enables rapid enterprise application deployment and simplifies lifecycle management, helping you:

- **Deploy** Oracle RAC and Oracle enterprise applications **7x-10x faster** than other solutions
- **Accelerate** enterprise application deployment with many Oracle VM Templates
- **Cut** the costs of licensing and support

Integrated Oracle ZFS Storage Appliance— Oracle Private Cloud Appliance features a fully integrated, enterprise-grade Oracle ZFS Storage Appliance for centrally storing the management environment as well as providing data storage for VMs. Oracle ZFS Storage Appliance is designed to be fully redundant for maximum fault tolerance and serviceability in production. This storage subsystem is also loaded with high-performance DIMM and flash memory for optimal read/write performance under the most demanding file storage workloads.

Oracle Private Cloud Appliance also includes full use of **Oracle Solaris** and **Oracle Linux** operating systems. The compute nodes and management nodes in Oracle Private Cloud Appliance are based on **Oracle x86 systems**, which are also used in other Engineered Systems. Using this proven framework means Oracle is able to make the most of its engineering knowledge and expertise to deliver a complete solution with components that work together seamlessly.

CHAPTER FOUR

ORACLE PRIVATE CLOUD APPLIANCE: DRIVING CUSTOMER SUCCESS

Let's look at a customer case study to see how Oracle Private Cloud Appliance helped this customer deploy its Cloud services.

A Financial Services firm in Asia Pacific has three core businesses: Investment, Private Wealth Management and Corporate Trust. The combination of different businesses results in a complex and difficult to manage technology environment. As part of its growth strategy, the Financial Services firm wants to refocus on areas where the firm has a competitive advantage and leverage existing core businesses for new growth. The CEO wants a simpler, leaner and more efficient business.

To achieve the business and operational objectives, the CIO looks for a converged infrastructure solution that would satisfy these requirements:

- Reduced costs and complexity of rapidly deploying applications
- Providing the hosting and management of Oracle Database and third-party business applications
- Consolidating Windows, Linux and Oracle Solaris applications onto one platform
- Single point of support for the solution, including hardware and software

After exploring several converged infrastructure solutions from different vendors, they chose Oracle Private Cloud Appliance, a fully virtualized converged infrastructure system with built-in software defined networking, flexibility, and the lowest TCO. The firm capitalized on the opportunity to move its business applications into the cloud with a turnkey solution for a flexible private cloud platform.

CUSTOMER BENEFITS

Oracle Private Cloud Appliance provided the following benefits to this Financial Services firm:

- **Agile response to the firm's business needs**
- **Easy to install and deploy quickly: from power-on to production in a few hours, not days or weeks**
- **Centralized, efficient and easy management**
- **Seamless growth with incremental compute nodes as needed**
- **Unlimited use of Oracle software within Oracle Private Cloud Appliance: Controller software, Oracle SDN, Oracle VM, Oracle Solaris*, Oracle Linux*, Oracle Enterprise Manager**





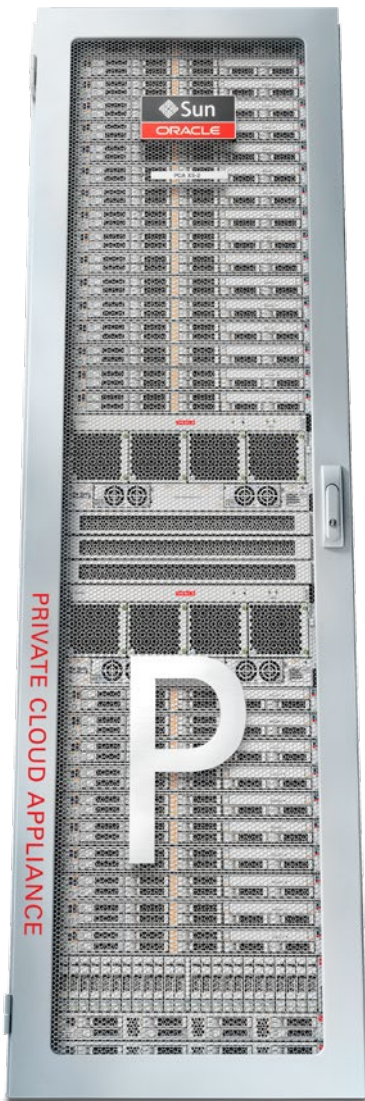
FIND OUT MORE

CONCLUSION

Managing and maintaining a data center that meets the ever-changing requirements of your business can be extremely challenging. Using powerful and innovative solutions is no longer enough—these solutions must also be co-engineered and fully integrated to deliver the highest possible levels of performance, efficiency, speed, and reliability.

Oracle Private Cloud Appliance is specifically designed with this in mind. It delivers a complete Converged Infrastructure solution from a single vendor, comprised of proven hardware and software technologies that can help your organization move applications into the cloud, and your business into the future.

To find out more, review the [resources](#) or visit oracle.com/pca.





FIND OUT MORE
RESOURCES

Stay Connected



WEBCASTS

- > **Larry Ellison Announces Oracle X5 Systems**
- > **Next Generation of Oracle Engineered Systems**
- > **Oracle Private Cloud Appliance: Simplify IT and Save Money**

WHITE PAPERS

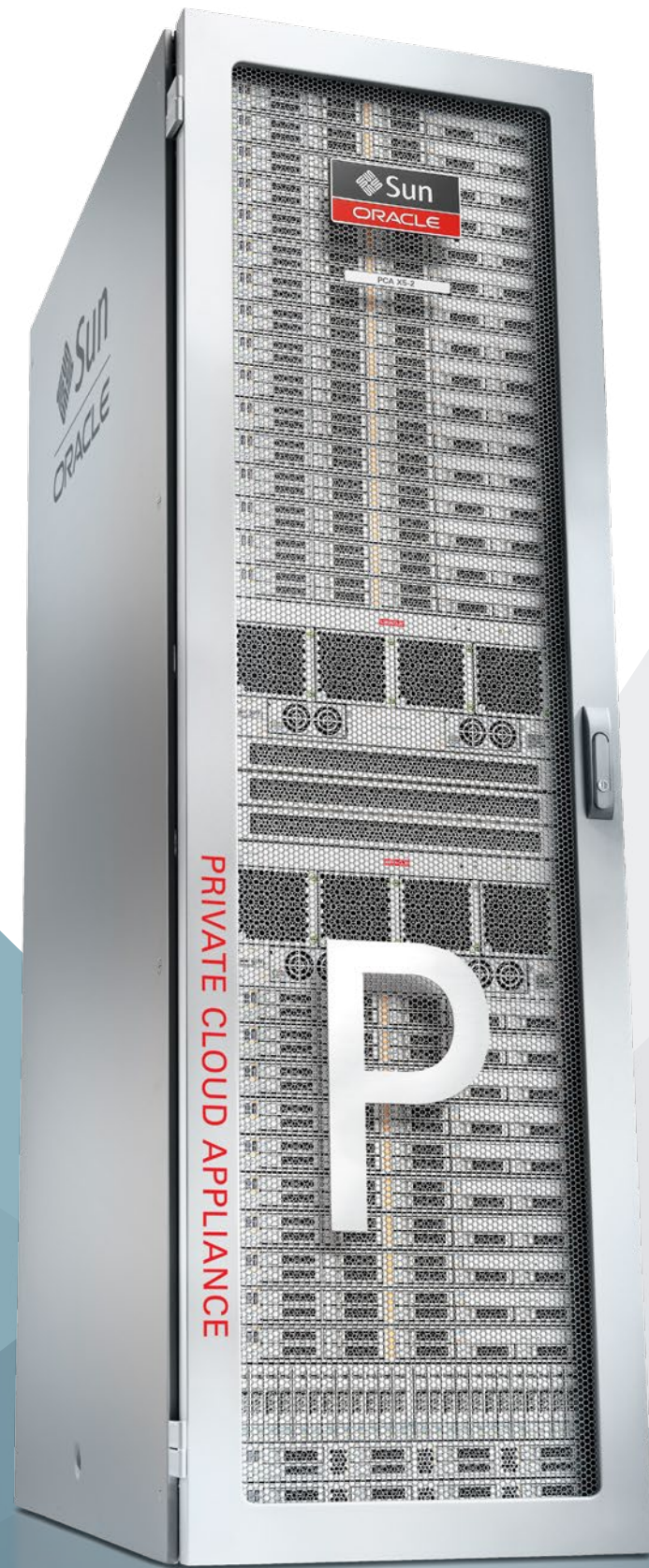
- > **Reduce Costs and Simplify IT with a Converged Infrastructure for Rapid Cloud Deployments (PDF)**
- > **Implementing Oracle Private Cloud Appliance in a PCI DSS Cardholder Data Environment**
- > **IDC White Paper—Oracle Virtual Networking Delivering Fabric Virtualization and Software-Defined Networks**
- > **Infographic: Cutting IT Costs with Oracle Engineered Systems (PDF)**

E-BOOKS

- > **Oracle Engineered Systems**
- > **Server Virtualization for Dummies—**
Learn more about how Oracle's server virtualization solutions can help you eliminate complexity, reduce costs, and respond rapidly to changing needs.
- > **Server Consolidation for Dummies—**
Find out how to reduce data center complexity through server consolidation, and how running consolidated applications on the latest server technology can reduce operating costs and improve.



FIND OUT MORE RESOURCES



PRODUCT PAGES

- **Oracle Private Cloud Appliance**— Learn about the one engineered system for your virtualized applications on Oracle Solaris, Linux and Windows.
- **Oracle Virtual Networking**— Learn how to create an agile data center with Oracle's software-defined network fabric solutions.
- **Oracle VM**— Explore the industry's most complete and integrated virtualization solution.
- **Oracle Solaris**— Find out more about the world's #1 enterprise operating system.
- **Oracle Linux**— Discover the best Linux operating system for enterprise computing.

OTHER

- **Oracle Private Cloud Appliance: Key Benefits for Partners**
- **Oracle Tackles Data Center Cost and Complexity with Next-Generation Engineered Systems**
- **Oracle Financing**— Discover the customized payment structures available through Oracle Financing.

Oracle offers a comprehensive and fully integrated stack of cloud applications and platform services. For more information about Oracle (NYSE:ORCL), visit oracle.com.

ORACLE®