

BLOG POST

# Oracle Brings Its Complete Public Cloud to On-Premises

Oracle's New Cloud@Customer Portfolio Changes the Next-Gen Compute Market



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# INTRODUCTION

At an Oracle virtual launch event on July 8, 2020, Larry Ellison announced the Oracle Dedicated Region Cloud@Customer offering. At the same event, Oracle also made the Oracle Autonomous Database on Exadata Cloud@Customer available. Effectively, Oracle is combining four major offerings—the Oracle Autonomous Database, Gen2 Oracle Cloud Infrastructure, Oracle Exadata and Oracle Cloud@Customer—together as Oracle Dedicated Region Cloud@Customer.

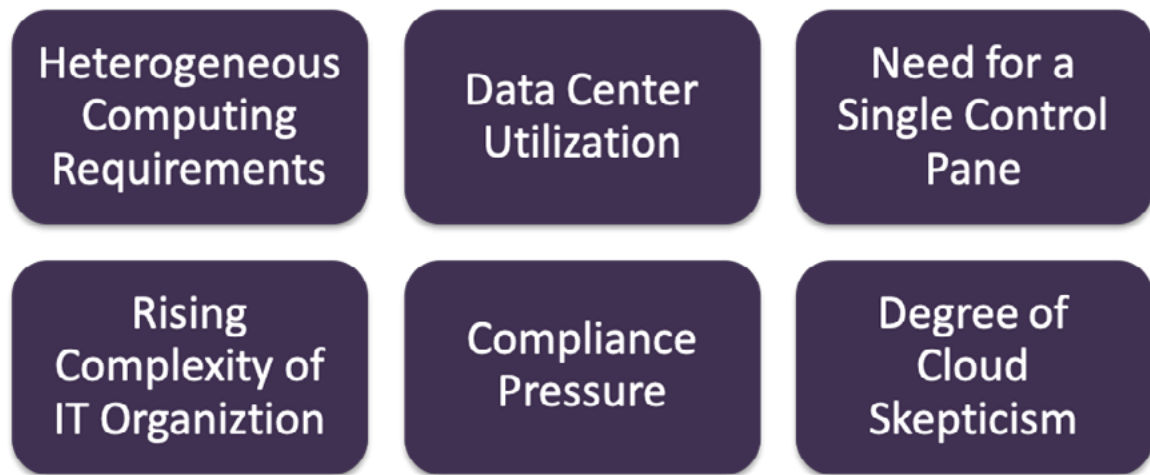
This blog post explores what sets the Oracle Cloud@Customer portfolio apart from its competitors in the market, presents key differentiators and concludes with actionable recommendations for CxOs.

## WHAT ARE THE KEY TRENDS?

There are a number of trends that are changing the enterprise computing landscape. Let's look at the most pertinent ones (see Figure 1):

- **Heterogeneous computing demands.** CxOs are confronted with rapidly changing computing demands. Barely having satisfied the business need for big data, the computing requirements that CIOs must answer stretch from support for machine learning to speech recognition for internal and external digital assistant/chatbot solutions, all the way to the edge of the enterprise. New computing platforms have entered the data center—for instance, with the advent of large GPU racks to run machine learning. A never-before-seen platform diversity manifests itself at the edge of the enterprise to support the Internet of Things (IoT). And the pace of change is not slowing down, as shown by new demands for additional workforce support (e.g., augmented/mixed/virtual reality) and new user experience support (e.g., holographic displays).
- **Rising complexity of IT operations.** The cloud has not simplified IT for almost all organizations because they are operating on a fluid automation pane that includes the public cloud and on-premises computing resources. Business priorities, timing and write-down cycles all determine at what time what load may be moved to the

Figure 1. Six Next-Generation Computing Platform Trends



Source: Constellation Research

public cloud or should remain on-premises. Changes in executive management often result in a shifting workload mix (for instance, due to software-as-a-service, or SaaS, portfolio changes) that affects the overall computing portfolio. A greater diversity in workloads and new next-gen application use cases create more heterogeneity and increase the complexity of IT operations.

- **Degrees of cloud skepticism.** Although many next-generation application use cases are best (and sometimes only) operated in the cloud, there is still a degree of skepticism over computing in the public cloud. It ranges from rational challenges (such as whether infrastructure-as-a-service vendor data instances are available inside of a necessary jurisdiction) to reasonable challenges (hardware write-downs, connections to existing on-premises computing resources, such as mainframes) to less rational concerns (for instance, regarding data safety). Nonetheless, it means that CIOs need to implement and operate workloads in local data centers for at least the next decade.

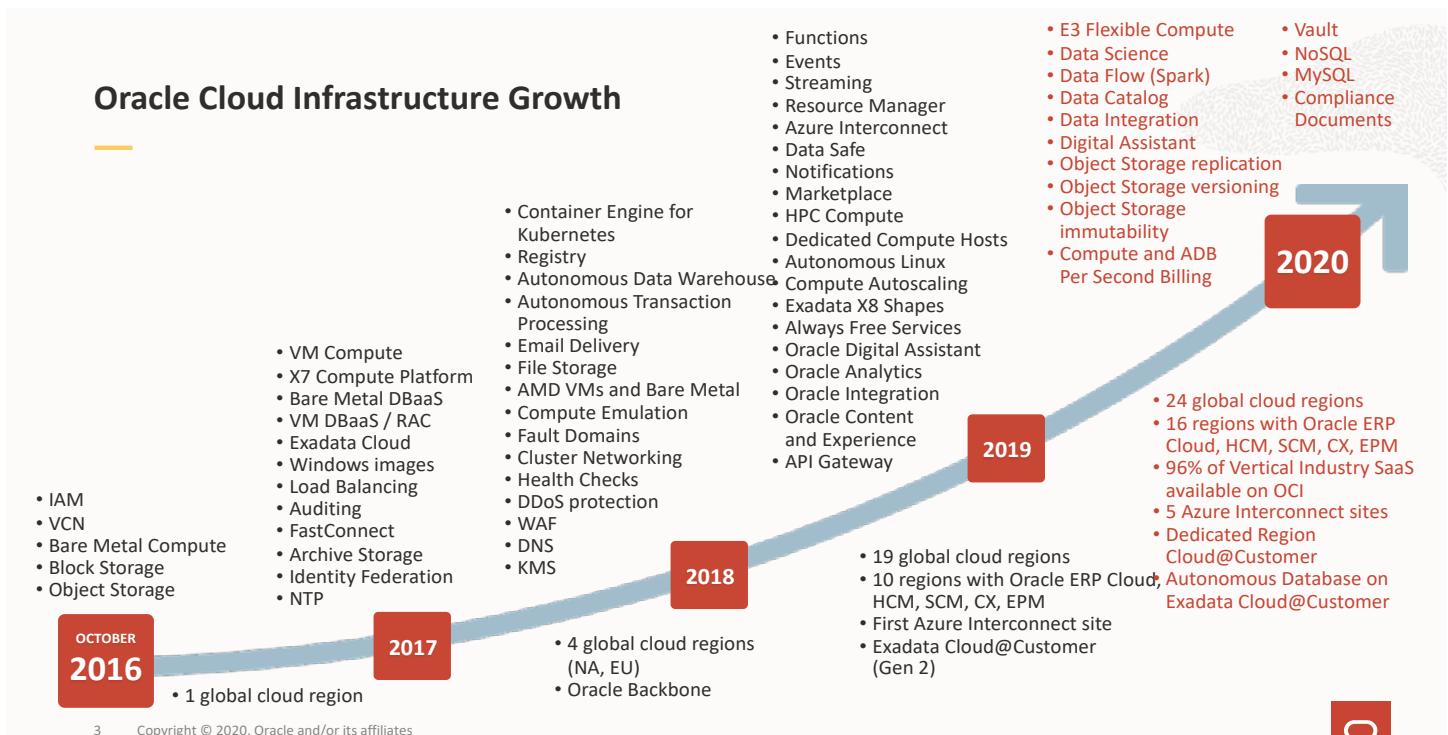
Other relevant trends are the pressure to achieve high data center utilization, the need for a single control pane and compliance pressure.

# WHAT IS ORACLE DEDICATED REGION CLOUD@CUSTOMER?

Oracle is bringing together four different offerings in the form of Oracle Dedicated Region Cloud@Customer.

1. **Gen2 Oracle Cloud Infrastructure.** This is Oracle's second generation of its cloud infrastructure, a radical departure from its first generation of public cloud offerings. Oracle has set the objective to surpass AWS in cloud regions by 2021. More importantly, the management stack of Oracle Cloud has matured to the point that Oracle feels comfortable adding more locations to its operational management, managing every customer-based Dedicated Region as a region in the Oracle Cloud (see Figure 2).

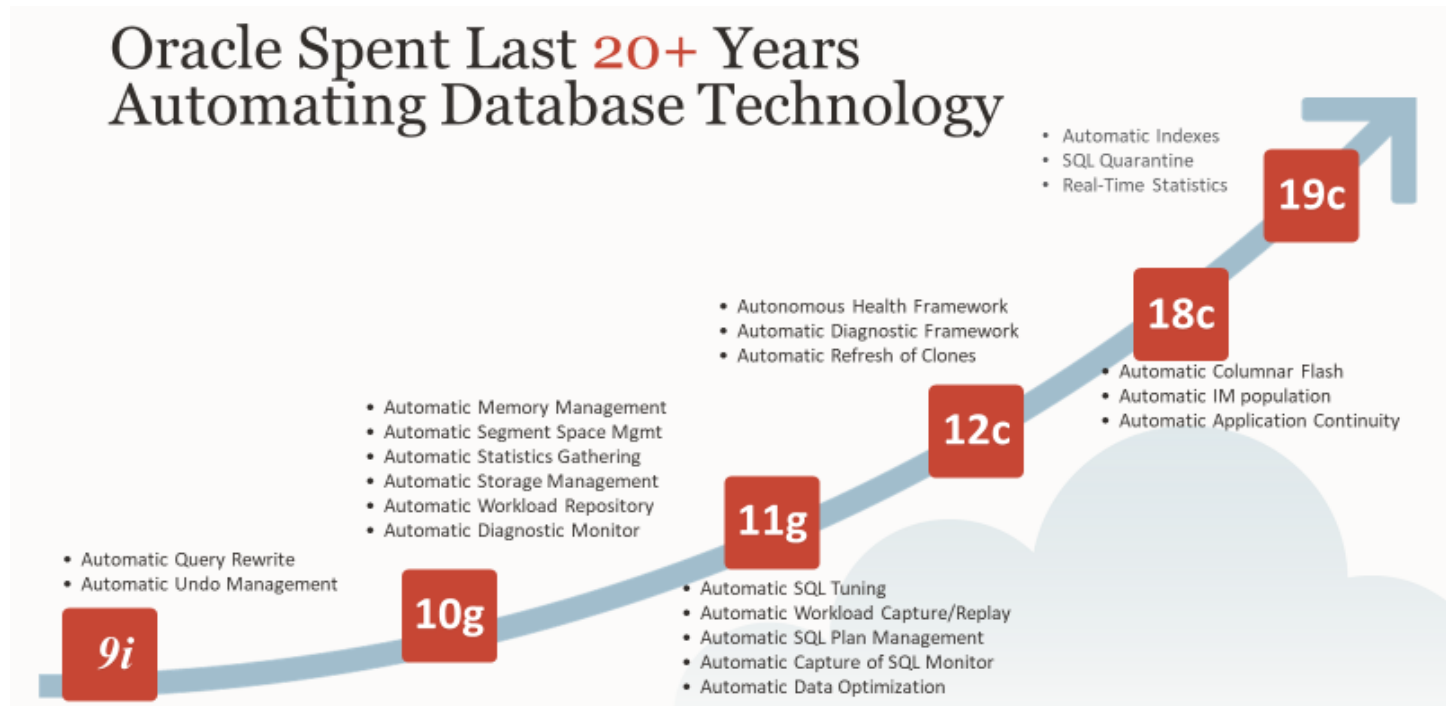
Figure 2. The Evolution of Oracle Cloud Infrastructure Generation 2



Source: Oracle

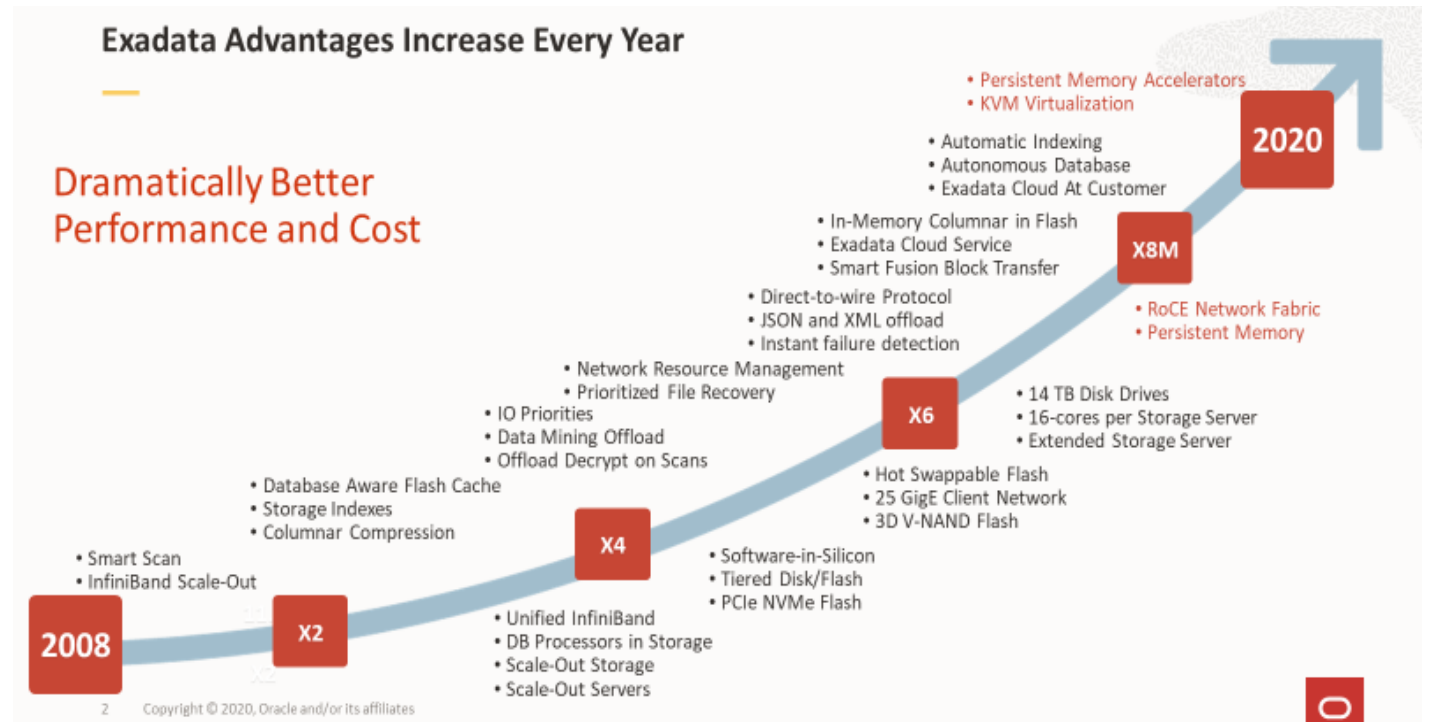
2. **Oracle Autonomous Database.** Oracle, as the market leader in relational database management systems (RDBMS), has laid down a compelling vision of running not only the Oracle Database but also the complete Oracle technology stack in an autonomous mode. Practically, Oracle is unchallenged not only in vision but also in execution toward this goal, and it's now making Oracle Autonomous Database available as part of the Cloud@Customer and Oracle Dedicated Region Cloud@Customer offerings (see Figure 3).
  
3. **Oracle Exadata Database Machine.** Oracle has a 10-plus-year successful track record of innovating the Exadata product line, in effect creating a hyperconverged appliance to run the Oracle Database more successfully than any other hardware vendor can. Oracle leverages not only the firsthand knowledge of its software intellectual property on the database side but also integrates the latest hardware technology to optimize performance. With its latest releases of Exadata X8M (part of the Oracle Dedicated Region Cloud@Customer offering), the newest Exadata has a high-speed internal network and persistent memory, delivering the highest-performing platform not only for the Oracle Database on-premises but also for Oracle Cloud@Customer (see Figure 4).

Figure 3. Oracle's 20-Year Database Automation Track Record



Source: Oracle

Figure 4. Oracle's 10-Plus-Year Innovation Record on the Way to Oracle Cloud@Customer



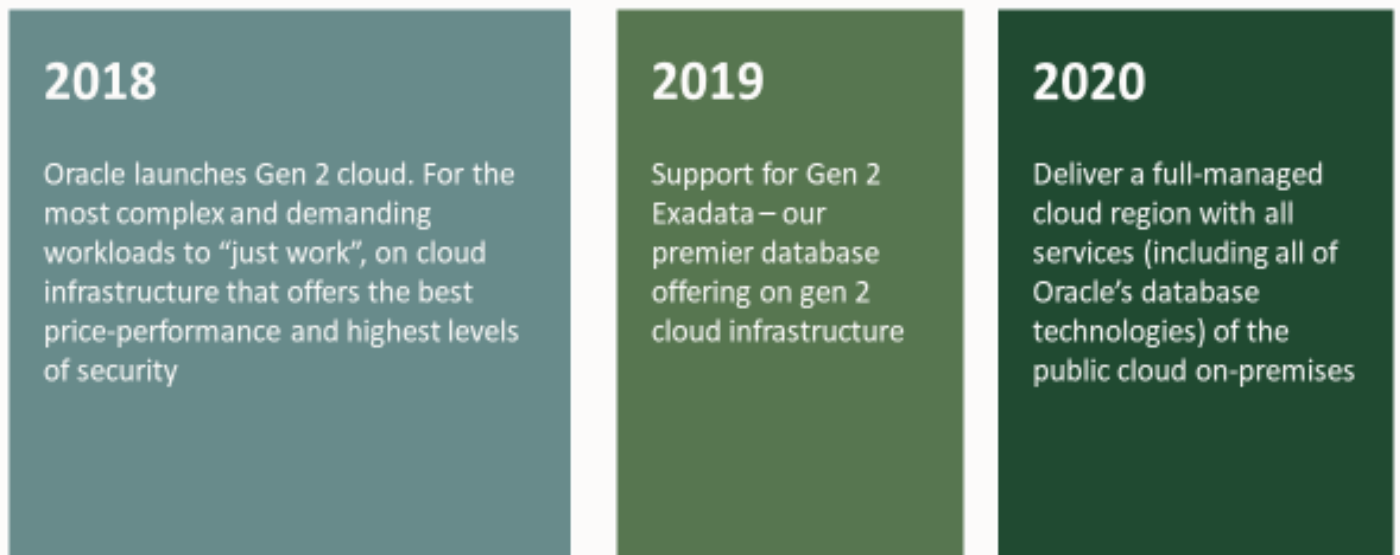
Source: Oracle

4. **Oracle Cloud@Customer.** Oracle is the next-generation platform vendor that offers the highest identity between its public cloud and on-premises offerings, which for practical purposes is 100%. CxOs who want to flexibly deploy and migrate workloads across the public cloud and on-premises devices have been using Oracle Cloud@Customer since its launch in 2016 (see Figure 5).

### The Full Oracle Cloud Stack—On-Premises

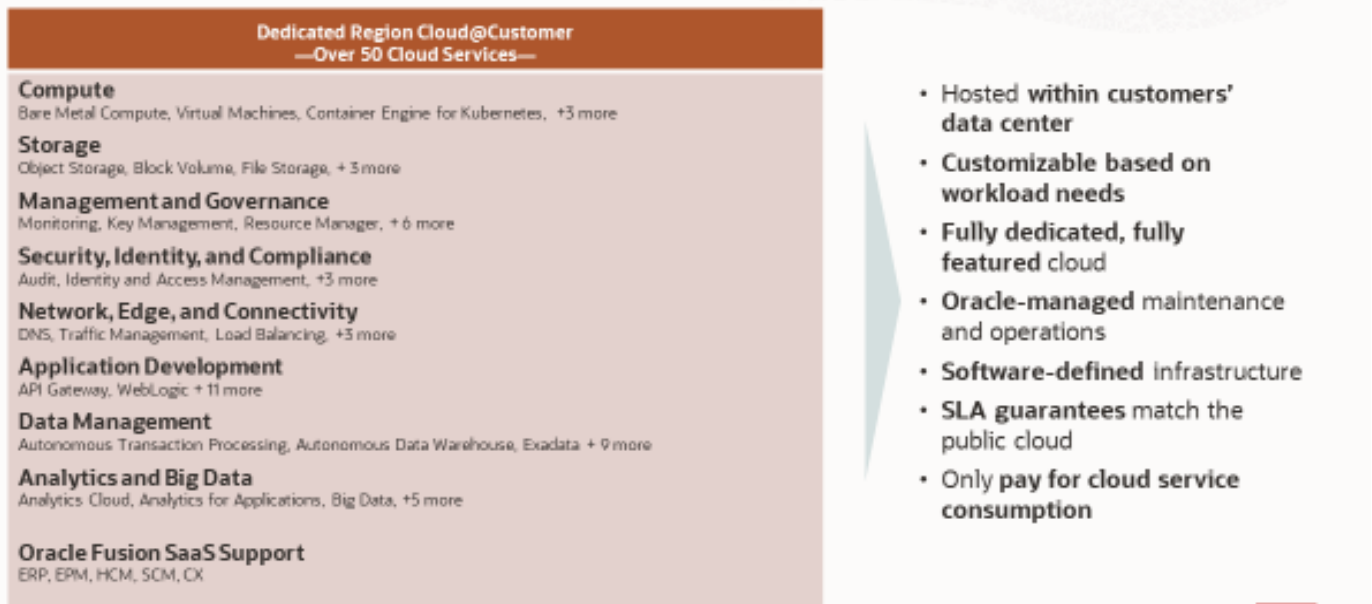
Over the last two decades, Oracle technologies have continuously grown vertically and horizontally. It is one of the few chip-to-click technology stacks remaining in the industry, and with that, it offers enormous automation advantages. Enterprises keen to pursue on-premises data automation find special value in being able to deploy the full Oracle public cloud technology stack in their local data centers (see Figure 6).

Figure 5. The Evolution of Oracle Cloud Infrastructure



Source: Oracle

Figure 6. The Complete Oracle Stack Comes to Enterprise Data Centers



Source: Oracle

In practical terms, Dedicated Region Cloud@Customer enables fully dedicated and fully featured cloud infrastructure services and SaaS applications with no compromise on capabilities that are available in Oracle's public cloud in the customer's own premises. True to its on-premises nature, Oracle Cloud@Customer allows customers to do more customization regarding specific workload needs—for instance, in data warehousing and the big data space.

Oracle Dedicated Region Cloud@Customer runs all database services on Exadata X8M platforms and all other Oracle Cloud services—including SaaS, Bare Metal Compute and Kubernetes—on Oracle x86 servers. Remarkably, Oracle offers the same service-level agreement (SLA) guarantees for Oracle Dedicated Region Cloud@Customer as on the Oracle Cloud. On the commercial side, Oracle brings the per-use cloud model on-premises, as customers pay only for cloud services consumption starting at a rate of \$500,000 per month. At the same time, customers that want Autonomous Database on Exadata Cloud@Customer can begin their on-premises subscription at \$10,800 per month.

## WHY DOES IT MATTER?

There are a number of reasons why CxOs care about viable next-generation computing platforms (see Figure 7).

- **Employee scarcity and skills shortage.** The first world is quickly running out of hands because of unfavorable aging dynamics. Enterprises in general and IT departments more specifically are not immune to these changes, and CxOs find it increasingly more difficult to hire employees with the right skills. Enterprises often pay regal amounts to IT outsourcing firms to solve this challenge. And enterprises that do not outsource find it just as difficult to train and improve the skills of their workforce—a good reminder that no enterprise function is being more disrupted by the cloud than IT.
- **Cost pressure.** For decades now, CxOs have been asked to reduce costs and do more with less, especially on the IT side. For a long time, the benefits of Moore's Law have bailed out CIOs because they were able to offer better computing power at the same costs or equal computing at lower costs. However, Moore's Law is running out of runway and, at the same time, new next-generation application use cases



Figure 7. The Five Buyer Challenges



Source: Constellation Research

require innovative new platforms that charge a premium. This is where the cloud and authentic cloud on-premises become attractive alternatives.

- **The innovation imperative.** While software is eating the world, enterprises are turning into software companies and, as such, they need to innovate faster than ever. This makes CxOs look for winning platforms that ideally allow them to move workloads as seamlessly as possible across platforms or from on-premises to the cloud. As enterprises flock to platform-as-a-service (PaaS)<sup>1</sup> products to help them build these next-generation applications,<sup>2</sup> workload portability is a key acquisition criterion and overall success factor for the selection of a PaaS<sup>3</sup> platform.

Additionally, CxOs face challenges because traditional, “old guard” vendors are no longer viable, such as anything from EMC now relabeled as Dell, as well as contractual challenges that limit them to outdated and older platforms, such as the EMC VMax, now resold by Dell as a PowerMax.

## ADVICE FOR CXOS

Constellation has the following recommendations to CxOs regarding the new Oracle Cloud@Customer portfolio:

- 1. Accept the automation imperative.** Enterprises need to look at automation to increase their productivity and efficiency. The shift from specialized operations to self-driving software is in full swing, and Oracle is a pioneer in this move to autonomous solutions. Enterprises have never scaled through people but by using tools and automation. This creates the automation imperative regarding IT operations, where CxOs need to look at any automation option that is at their disposal. Fast economic turns likely accelerated by pandemic outbreaks further increase the pressure to automate and strengthen the automation imperative—that is, if a process can be automated, it should be. Remarkably, Oracle Autonomous Database is the clear leader in automation because no database competitor has stepped up to challenge Oracle (yet). Oracle Autonomous Database is available on both Exadata Cloud@Customer and Dedicated Region Cloud@Customer.
- 2. Oracle Database customers should evaluate Oracle Autonomous Database on Exadata Cloud@Customer and Oracle Dedicated Region Cloud@Customer sooner rather than later.** Existing Oracle Database customers will not have a difficult time deciding whether to adopt the Oracle Autonomous Database or Oracle SaaS applications on-premises. Nonetheless, they are advised to perform a cost-benefit analysis. The uncertainties around talent availability and the constant technical skills challenge should make this an easy business case for on-premises deployment of Oracle Autonomous Database and SaaS applications.
- 3. Non-Oracle Database customers need to do a cost-benefit analysis for a potential switch to Oracle.** Given the slow (or no) response by Oracle's traditional database competitors on the innovation included in Autonomous Database, non-Oracle customers should consider a move to Oracle Autonomous Database. An analysis naturally needs to include the cost of migration, the cost for new licenses and the cost of long-term operations, factoring in the cloud on-premises options. Constellation believes that Oracle can prevail as a winner in most cases, with application rewrite costs likely being the deal maker or showstopper.

4. **CxOs need to consider Exadata as a platform for Oracle Database.** Oracle has spent a lot of time designing and manufacturing the ideal database platform to run the Oracle Database: Oracle Exadata Database Machine. The latest Exadata X8M system should be evaluated by CxOs who use the Oracle Database, no matter which deployment form: on-premises, on Oracle Cloud or on Oracle Cloud@Customer. Purpose-built hardware always beats general do-it-yourself hardware platforms from the likes of HPE, IBM and Dell EMC as well as software in search of do-it-yourself hardware, such as Nutanix.
5. **Consider Oracle Autonomous Database for next-generation applications.** Enterprises need to build next-generation applications that reflect the new best practices in the era of Infinite Computing. The Oracle Autonomous Database is highly likely to deliver deployment and operational TCO savings over the competition. In addition, with Oracle Exadata Cloud@Customer and Oracle Dedicated Region Cloud@Customer, CxOs get the flexibility of workload deployment between on-premises and public cloud that they need to operate their enterprise at its best.
6. **Practice commercial prudence.** As always, CxOs need to practice commercial prudence when it comes to platform decisions. One-time costs, ongoing costs, capex vs. opex and lock-in effects are the key areas of consideration before making platform decisions. Database platform decisions are no exception to the consideration of commercial prudence in all phases of purchase, adoption and the usage cycle. Another consideration is the potential savings as outsourced services to operate and maintain Oracle Databases become obsolete with the adoption of Oracle Autonomous Database. This not only benefits an enterprise with budget savings but also reduces the operational complexity of database operations.

## MYPOV

When four attractive products come together in a new vendor offering, good things happen. This is valid for Oracle as well, where we have shown how the four separate offerings—Oracle Exadata, Oracle Gen 2 Cloud Infrastructure, Oracle Autonomous Database and Oracle Cloud@Customer—are coming together. Exadata Cloud@Customer powered by Oracle's new X8M PMEM technology is a game changer by itself, so wrapping these additional offerings around it makes Dedicated Region potentially positioned to be an unstoppable force in the battle for on-premises cloud market share and mindshare vs. AWS, Microsoft Azure and other, smaller players.

With Oracle Dedicated Region Cloud@Customer, Oracle is effectively bringing the public cloud architecture to customers' premises. This is great news for CxOs, who do not have to compromise on functional capabilities, get services as if they operated in the public cloud with the same SLAs, enjoy commercial elasticity (aka, "pay for what you use") and maintain control of their data for compliance purposes.

This is a strong differentiating move by Oracle because it does not have to compromise on which functionalities and capabilities will be available on-premises. Oracle achieves the maximum identity between on-premises and public cloud, giving CxOs the peace of mind to operate workloads where they can best be run and operated.

For non-Oracle customers, the benefits of Dedicated Region Cloud@Customer make this an offering to seriously consider. It is very likely that operational savings and benefits eclipse the migration costs. With Oracle's lead regarding identity, it is unlikely to see a competitor to come up with a similar high-identity offering in the next two to three years, or ever. Beyond the complete offering, elements like the Oracle Autonomous Database are, on their own, attractive enough to justify their evaluation. This is reinforced by the fact that traditional database competitors have failed to respond to Oracle's activity around the Autonomous Database.

Oracle customers must evaluate this new offering. It gives them the most cost-effective way to operate the whole Oracle technology stack on-premises, should they require it. Reducing complexity, lowering personnel costs and focusing talent on new areas are all attractive tangible assets for CxOs who have to focus on helping their IT organization to enable Enterprise Acceleration.<sup>4</sup>

## ENDNOTES

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- <sup>1</sup> For more best-practice considerations for PaaS, offerings, see: Holger Mueller, “As PaaS Turns Strategic, So Do Implementation Considerations,” Constellation Research, May 9, 2018. <https://www.constellationr.com/research/paas-turns-strategic-so-do-implementation-considerations>
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- <sup>2</sup> For more on next-gen applications and PaaS offerings, see: Holger Mueller, “Why Next-Gen Apps Start with a Next-Gen Platform as a Service,” Constellation Research, April 5, 2018. <https://www.constellationr.com/research/why-next-gen-apps-start-next-gen-platform-service>
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- <sup>3</sup> For a Constellation ShortList™ on PaaS vendors, see: Holger Mueller, “Constellation ShortList PaaS Tool Suites for Next-Gen Apps,” Constellation Research, August 22, 2018. <https://www.constellationr.com/research/constellation-shortlist-paas-tool-suites-next-gen-apps>  
Also: Holger Mueller, “Constellation ShortList PaaS Suites for Next Gen Apps,” Constellation Research, August 22, 2018, <https://www.constellationr.com/research/constellation-shortlist-paas-suites-next-gen-apps>
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- <sup>4</sup> For more on Enterprise Acceleration, see: Holger Mueller, “Why People Leaders Must Embrace Enterprise Acceleration,” Constellation Research, July 3, 2018. <https://www.constellationr.com/research/why-people-leaders-must-embrace-enterprise-acceleration>

## ANALYST BIO

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Vice President and Principal Analyst

Holger Mueller is vice president and principal analyst at Constellation Research, providing guidance for the fundamental enablers of the cloud, IaaS, PaaS, with forays up the tech stack into big data, analytics and SaaS. Holger provides strategy and counsel to key clients, including chief information officers (CIO), chief technology officers (CTO), chief product officers (CPO), investment analysts, venture capitalists, sell-side firms and technology buyers.

Prior to joining Constellation Research, Holger was VP of products for *NorthgateArinso*, a KKR company. He led the transformation of products to the cloud and laid the foundation for new business-process-as-a-service (BPaaS) capabilities. Previously, he was the chief application architect with *SAP* and was also VP of products for *FICO*. Before that, he worked for *Oracle* in various management functions—both on the application development (CRM, Fusion) and business development sides. Holger started his career with *Kiefer & Veitinger*, which he helped grow from a startup to Europe's largest CRM vendor from 1995 onwards. Holger has a Diplom Kaufmann from University of Mannheim, with a focus on Information Science, Marketing, International Management and Chemical Technology. As a native European, Mueller speaks six languages.

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