



ESG WHITE PAPER

Oracle Dedicated Region Cloud@Customer— Your own Real Estate...Your own *Real* Cloud

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Executive Summary: Oracle’s On-premises ‘*Publica Cloudus Indentalis*’

The fabricated pseudo-Latin product descriptor is deployed here for two reasons. First, it might actually be a tad catchier than Oracle’s actual moniker for its latest announcement—Oracle Dedicated Region Cloud@Customer—but, more importantly, it is to make you really stop and appreciate the innovation that this new Oracle offering represents. Because users need to stop long enough to do the “translation” as to what it really means...and what it could mean for them.

First, in plain English, Oracle Dedicated Region Cloud@Customer is essentially a clone of a full Oracle Public Cloud region in a user’s premises. It is of course customer-sized and customer-located, but in all other aspects and capabilities, it’s identical to the full Oracle Public Cloud—which of course includes the company’s second-generation cloud infrastructure, Fusion SaaS applications, its Autonomous Database, Exadata Cloud Service, bare metal compute, Kubernetes, and stacks more. As Larry Ellison, CTO and Chairman, said about the attributes, “Simple statement: if it’s in our public cloud, it’s in our Dedicated Region. Period. It’s all the services, and the services operate identically, and the costs are identical.”¹ Oman ICT Group was a highlighted user at the announcement, and an excellent example, given its lack of proximity to a major public cloud regional data center.²

The general concept that this represents (some sort of cloud-native ability on-premises) is not unique to Oracle, although Oracle first introduced this category of cloud service with its “Gen 1” Cloud@Customer as far back as 2016. However, with all the claims by cloud providers and hardware vendors alike, there is currently plenty of market misunderstanding and obfuscation.³ Regardless, the need is clear: Organizations are always transforming their IT environments to become more agile and responsive; a key component of such transformations is a contemporary IT infrastructure/ecosystem, and in the last decade or so, this has increasingly meant turning to the public cloud to some degree to obtain the requisite flexibility. Yet many IT organizations are restricted, in whole or in part, by any number of reasons that mandate they operate on-premises. Of course, often these organizations would *like* the attributes of cloud but in their own data centers, and the cloud hyper-scalers have begun to introduce alternatives to what Oracle started in 2016 by offering early-stage services aimed at addressing some portion of the need for on-premises public cloud services.

But the specific execution by Oracle *is* unique. Its Dedicated Region Cloud@Customer package delivers exactly the same infrastructure, services, and operational model that are leveraged in its second-generation public cloud to any customer location. Dedicated Regions are consumed via a subscription model with pay-as-you-use-and-grow pricing (which starts at just \$500k/month).⁴ The Oracle Dedicated Region is not a shared part of anything, nor a watered-down version of something else, and user data never leaves the user location (unless the user specifically wants it to). Instead it is (at the risk of introducing something else that needs translating) a genuine, complete, no compromise “personal public cloud.”

A Key Fact and A Notable Opinion

- The fact: Semantics matter; “similar” does not mean “same as.” Likewise, “some same elements” do not add up to a “same thing.” Furthermore, “unique” is not a relative term—there are, at least in terms of making sense, no such things as “very unique” or “somewhat unique.” It may seem condescending to state these obvious things, but “same as” and “unique” are both crucial concepts to understanding the differentiation and value of Oracle Dedicated Region Cloud@Customer versus the alternatives (where the big name market players are obviously Microsoft and AWS, with, respectively, their Azure and Outposts offerings).

¹ This quote is taken from the [Oracle Live digital announcement event](#) on July 8, 2020.

² This paragraph is adapted from the [author’s blog on the Oracle Live announcement event](#), posted on esg-global.com on July 9, 2020.

³ For more on varying vendor approaches, including financial packaging to on-premises cloud variants, please see the comparative section on page 6

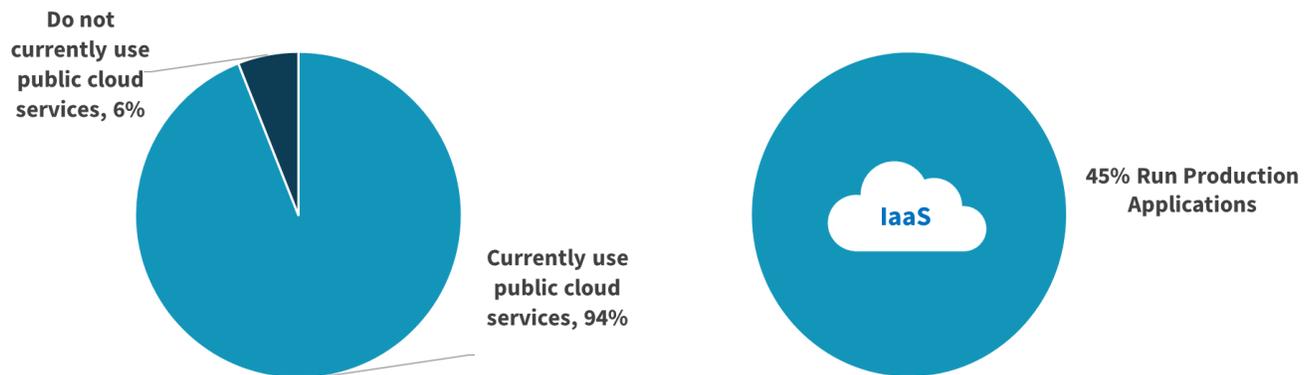
⁴ The \$6M per year starting price tag may seem high, but it is objectively—and comparatively—very reasonable

- The opinion: After more than three decades in the technology space, this paper’s author has formed a strong belief that there is an inverse relationship between the length of time/prose/PowerPoint/whatever it takes to explain the value of something in IT, and the actual value of that something in the real world. Oracle Dedicated Region Cloud@Customer is a perfect example of the relationship. It offers enormous value but can be explained very succinctly. (To this point, the standard customer briefing PowerPoint deck is only 12 slides.) The rest of this paper will—from an explanation and analysis perspective—try to demonstrate a similar trait.

Market Transitions, Complexity, and Needs

Ongoing Digital Transformation: Digital transformation initiatives, encompassing widespread personnel, application, process, and technology changes, are driving modern IT environments, with hybrid- and multi-cloud ecosystems becoming the norm. According to ESG research, only 6% of users attest to no usage of the public cloud at all, while 67% of users leverage an IaaS public cloud to some degree and 45% are already running production applications in the public cloud⁵ (moreover, 70% of organizations have deployed, or expect to deploy, their modern container-based applications in a hybrid infrastructure⁶). The drive to deliver new applications and services and better customer experiences itself invariably demands more operational agility and flexibility...and the public cloud has definitely helped in this regard.

Figure 1. Public Cloud Services Usage



Source: Enterprise Strategy Group

But when an organization, or business unit, or even specific application, is required to stay on-premises (maybe for reasons of regulations, data sovereignty, security, lack of available public cloud, or perhaps simply executive belief), it would often like to replicate the key attributes of the public cloud in its own data center only to find its hopes dashed by some mix of surprising complexity,⁷ lack of skills, expense (whether for capital, management, or scaling), or an inability to run identical applications/functionalities on- and off-premises. Deploying and operating a cloud-native on-premises environment is prima facie compelling, but practically challenging. Some of the needs for an ideal deployment include:

- Fully managed operations to reduce staff burden and allow them to focus on innovation.

⁵ Source: ESG Master Survey Results, [2020 Technology Spending Intentions Survey](#), January 2020. All ESG research references and charts in this white paper have been taken from this master survey results set, unless otherwise noted.

⁶ Source: ESG Master Survey Results, [Trends in Modern Application Environments](#), December 2019.

⁷ 64% of organizations surveyed by ESG said that their IT is more, or significantly more, complex now than it was two years ago.

- Identical infrastructure on-premises and in the public cloud.
- Access to all the same cloud services in either location.
- Same consumption model (subscription-based, pay as you go/grow).
- Optimized performance, availability, and security (with enforceable SLAs, and for compliance / audit, etc.).
- Enterprise-class service and support.

Oracle Delivers On-premises Cloud-native Ecosystem with Dedicated Region Cloud@Customer

Oracle's new Dedicated Region Cloud@Customer delivers a true cloud-native environment on-premises and without compromise. *It meets all the requirements previously mentioned.* That's the essence of the story.⁸ but to add just a few icing samples on this highly capable innovative IT cake:

1. The underlying infrastructure is not only identical to Oracle's Public Cloud, including multiple storage and networking options, but also delivers impressive specs, which is important given that running business intelligence queries is the most commonly-cited cloud infrastructure use case in ESG research.
 - a) For the Oracle Database layer, the foundational Exadata X8M platform can deliver latency of just 19 microseconds, which is impressive in itself, but especially so when contrasted with an AWS Outposts system running flash and RDS, where latency is 50x that.⁹ Oracle also offers up to 12M SQL Read IOPS.¹⁰
 - b) Real SLAs for management, performance, and availability, where the 99.95% availability SLA includes planned downtime. Plus, there's no application downtime for planned upgrades and maintenance.
2. Over 50 cloud services are included, ranging from application development to governance, all of which are available across multiple compute environments (bare metal, VM, HPC, GPU, and OS management).
 - a) Beyond the services, Oracle handles all maintenance, security, and operations.
3. Delivers a dozen data management options to fit pretty much any environment, including autonomous DW, DB, TP and Oracle MySQL and NoSQL.
4. All Dedicated Regions are fully self-contained so all user data, metadata and APIs remain in a user's local data center. If multiple user locations are needed for business continuity purposes, Oracle Dedicated Region Cloud @Customer can be deployed in a single user's multiple data centers in close geographic proximity.
5. The pay-as-you-go model is published and is the same price as Oracle's public cloud. Users can apply their Universal Credits—you can almost envisage buying a CIO a \$6M Oracle gift card as a Christmas stocking stuffer!

⁸ As mentioned, the essence here is easy to "get." Full product details are not the intent of this report but are of course available on [Oracle.com](https://www.oracle.com).

⁹ Oracle numbers, quoted in its July 8, 2020 announcement event

¹⁰ Ibid.

User Value, Competitive Comparison, and Market Relevance

User Value: As stated at the start of this paper, semantics matter. This is because there are a number of offerings, notably from AWS and Microsoft, that sound “the same” as what Oracle is doing. And, indeed, at the highest conceptual level each is the same. All three offer a flexible, subscription-based ability to run certain databases and other IT applications in an on-premises public cloud of some sort, an acknowledgement of the hybrid IT world that is going to be dominant for the foreseeable future. But when we look at the execution, and thus user value, we can see there are many meaningful differences. These span the databases themselves (obviously Oracle is Oracle, meaning no existing applications need rewriting), the number of services and their degree of sophistication (over 50 for Oracle, with extensive field enterprise experience; just a handful from the others, often with little field exposure), as well as fundamental specs like performance, security, price-performance, and so on (where Oracle’s offering excels).

Competitive Comparison: This is where Oracle’s offering, at least for now, is unique. It offers the same cloud installation, applications, services, and experience as it does for its public cloud. The competition, whether cloud infrastructure providers or SaaS vendors, does not (in fact, few SaaS vendors have any on-premises cloud infrastructure offering, in any case). And Oracle then adds attractive economics, application consistency, and autonomous capabilities into the mix.

While the general user motivations to use public cloud on-premises will typically include some mix of regulations, compliance, executive preference, application criticality, availability of skills and so on, when viewing the choice of ways to meet specific needs, users’ choices become limited because the available options (the Oracle approach versus that of Google, Microsoft, and AWS) come at the problem in very different ways from very different perspectives:

1. Oracle’s Dedicated Region is not an “outpost” (no pun intended as this applies to any public cloud provider whose solution is to put an outpost of its cloud in your data center). Whereas the competition comes at this from a traditional cloud angle, where cloud is fundamentally the/their thing/product, Oracle comes at it from a traditional enterprise angle, where cloud is a concept/approach and the resulting ecosystem is yours.
2. It helps to think of the non-Oracle offerings as akin to a reversal of the edge model: Hyper-scaler public clouds already effectively surround everything, and now you can have some of that inserted/injected into your on-premises core. For example, AWS Outposts isn’t truly a standalone on-premises solution, it is more of an offshoot of the “mothership.” It cannot truly function as a standalone as it requires an umbilical cord (a user-data tunnel/pipeline). Oracle provides a legitimate public cloud on-premises, with just a small, non-user-data-moving, control tunnel.
 - a. This tunnel/pipeline distinction is crucial. Oracle’s is solely for system control, others are for actual user data. For instance, AWS Outposts does not currently use on-premises data backup to a local storage device. Instead, it requires its users, assuming they want backup, to back up Outposts data to an AWS public cloud region. Depending on the specific needs, regulations, and local AWS options, this data movement could either significantly diminish, or completely preclude, the ability for the user to maintain the data residency and sovereignty that was highly likely to have been a factor in using an on-premises cloud in the first place! In addition to maintaining all production user data on-premises, Oracle’s Dedicated Region Cloud@Customer can also store all backups on-premises, using offerings such as its Oracle Zero Data Loss Recovery Appliance (ZDLRA) and the Oracle ZFS Storage Appliance.
3. Foundationally and vitally, the 50+ services included with Oracle Dedicated Region Cloud@Customer, ranging from SaaS and bare metal compute to its Autonomous Database, mean that Oracle isn’t giving its users just a “cloud-lite” subset of its cloud capabilities or only a “cloud-like” consumption experience. It is truly giving them a

full cloud experience. Might others follow Oracle? Of course it is possible, but (a) it's not easy, (b) it depends on what their strategic intent/business model is, and (c) they don't yet have the product portfolio, range, and decades of experience to offer the kind of enterprise application support found in Oracle's DNA.

All of this clearly puts Oracle in a strong competitive situation for on-premises cloud, particularly when it comes to enterprise-class organizations and applications, such as banking, insurance, and telecommunications. Of course, Oracle understands that it does not currently have market-share leadership in overall cloud IT and so it makes sense that it is keen to beat its corporate chest about recent successes for Oracle Cloud Infrastructure (OCI). Its marquee acquisition of Zoom as a public reference is not only impressive but highly pertinent, as the video conferencing platform has become so crucial to the global communication fabric of late. Zoom is transferring over 8 petabytes through OCI servers every day—equivalent to 100 years of HD video.¹¹

Market Relevance: Despite the differences in execution, the likelihood for users to consider Oracle's Dedicated Region will be increased by the marketing efforts of the hyperscalers (mainly AWS and Azure) as they are all embarking on early-stage efforts to reach out from their cloud castles and into the on-premises world. Their solutions in this arena are not yet as extensive, simple, or sophisticated as those from Oracle, but the trend is likely to grow the pie for everyone, providing plenty of opportunity for Oracle.

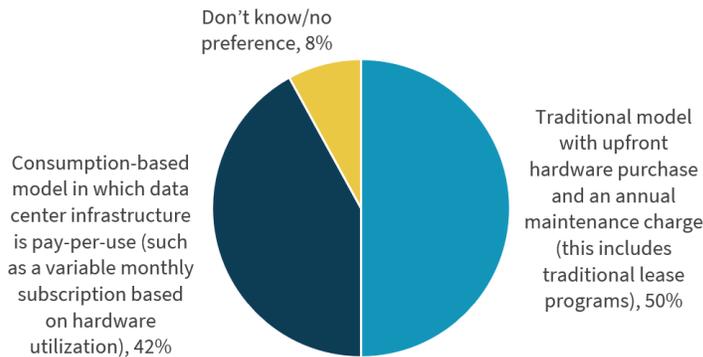
Market relevance and probable receptivity for solutions such as Oracle's Dedicated Region Cloud@Customer looks extremely positive, based upon ESG's research findings:

- If we look at users' architectural deployment preferences for new cloud applications, we find that although cloud-first is holding steady (at 38%) a pragmatic, hybrid approach is actually the most common (attested to by 53% of respondents). Moreover, running business intelligence queries is the most-cited cloud infrastructure use case (selected by 51% of respondents, a number that rises to 71% for organizations with mature digital transformation initiatives), which augers well for Oracle, of course.
- Operationally, 64% of organizations say that IT is more, or significantly more, complex than it was two years ago. Compounding this complexity, the top IT skills shortage reported by respondents is cybersecurity while the next three on the list are all associated with hybrid cloud (IT orchestration/automation, cloud architecture/planning, and IT architecture/planning. These are all areas where Oracle's integrated "Engineered System" foundation for the Dedicated Region allows it to reduce risk, difficulty, and cost...via end-to-end security and autonomous management, as well as dynamic and flexible consumption.
- And, most pertinent and direct of all, users are already declaring (see Figure 2) a substantial desire for a cloud consumption model for their on-premises infrastructure, even reaching a majority in younger organizations.

¹¹ As quoted in the Oracle Live event of July 8, 2020.

Figure 2. Popularity of On-premises Cloud Consumption Model

Applying the Cloud Consumption Model to Data Center Infrastructure Is Gaining Momentum...



Question text:

Assuming the net-cost was the same, which of the following do you believe would be your organization's preferred payment model for on-premises data center infrastructure? (Percent of respondents, N=658)

...Especially among Younger and Cloud-first Companies

Percentage of organizations that would prefer a consumption-based model for their data center infrastructure based on:

Age of organization:

- 10 years or less: **55%**
- 11 to 50 years: **46%**
- More than 50 years: **26%**

New app deployment strategy:

- Cloud-first: **54%**
- Consider both: **41%**
- On-premises-first: **31%**

Source: Enterprise Strategy Group

- Finally, as this report is published, in mid-2020, the world is enduring the COVID-19 pandemic. In terms of its impact to business and IT operations, ESG found that 77% of IT executives say they are looking to purchase technologies with a higher ROI, while those organizations spending more than their original IT budget for 2020 most commonly reported doing so in order to implement long-term technology strategies that will deliver them a more flexible and resilient infrastructure in the event of future major business disruptions like this one.¹²

The summary of the above? Hybrid IT is the leading IT model today, with the cloud used even for traditional on-premises applications such as business intelligence but skills shortages and the inherent complexity of a case-by-case pragmatic deployment model are combining to drive IT organizations to seek flexibility in terms of both operations and finance...not just for today but looking ahead.

Oracle Dedicated Region Cloud@ Customer is certainly capable of checking all of these boxes with its hybrid operating model than can reduce IT complexity and be consumed flexibly.

The Bigger Truth

As stated at the beginning of this report, the power of the Oracle Dedicated Region Cloud@Customer offering is represented in the simplicity of explaining it: Users get an actual cloud, fully managed, identical to the Oracle public cloud, but just in their own data center rather than elsewhere. The title of this paper says it thus: *Your own Real Estate...Your own Real Cloud*. That's it in a nutshell.

This is the ultimate extension to Oracle's commitment to cloud...but "cloud" as an overall IT approach rather than just a singular place or style. "Cloud-native" does not have to be constrained to only the traditional public cloud. It can be your own public cloud. Organizations can obtain true public cloud infrastructure, services, operations, economics, and

¹² Source: ESG Research Report, *The Impact of the COVID-19 Pandemic on Remote Work, 2020 IT Spending and Future Tech Strategies*, May 2020.

experience from Oracle today. This provides an ability to deliver the on-premises capability that is crucial for, and demanded of, many industries, applications, and geographies, especially those with specific requirements or desires for compliance, data, or security issues.

Converts to any IT cause can end up being the most evangelical and strident in terms of adding value. Oracle was hardly first out of the blocks in terms of cloud...but just look at it now! Then again, Google was by no means the first search engine, nor Apple the first to deliver a smartphone. So, being first isn't always best. That said, while timeliness can be overcome, a lack of utility cannot (just ask Microsoft about search and smartphones) and this is where the Oracle strategy in general, and this announcement specifically, shines. The Oracle Dedicated Region Cloud@Customer is the *full* Oracle Cloud offering, without compromise.¹³

While the focus of this report, and Oracle's product, has rightly been on "cloud" and the cloud-originated competitors to Oracle, there are of course also efforts by the on-premises hardware community to re-designate their devices as on-premises clouds, with varying combinations of aptitude and cloud-washing. But none have the ability to use the descriptors of "unique" and "same," or indeed "completeness," for their on-premises cloud solution as Oracle does with its Dedicated Region Cloud@Customer.

There is an old saying that "the grass is always greener on the other side." With its Dedicated Region offering, Oracle is making that saying redundant: There doesn't have to be another side...you can bring all the grass under your own roof!

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¹³ This paragraph is adapted from the [author's blog on Oracle's announcement](#), published on esg-global.com on July 9, 2020.