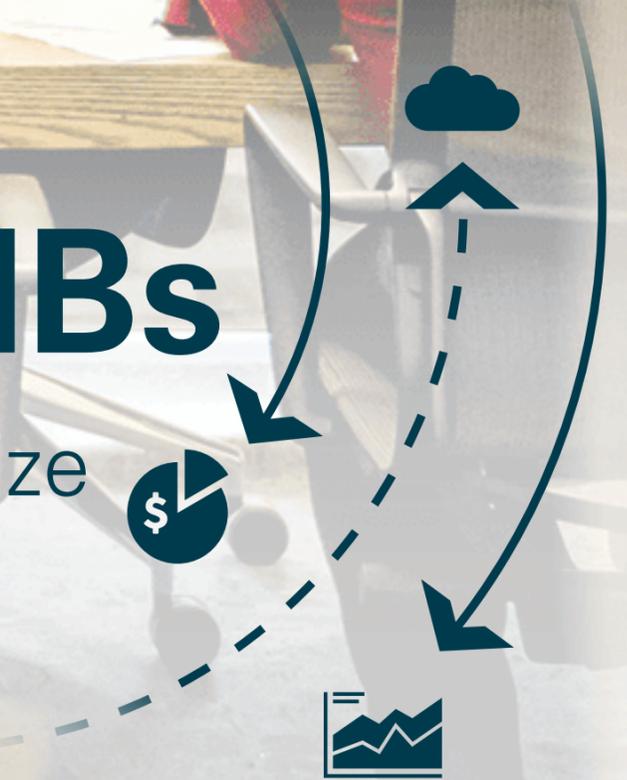


**ORACLE®**

Autonomous  
Database

# Intelligent Automation for SMBs

Market leaders rely on Oracle Autonomous Database to minimize costs, reduce risks, and accelerate innovation



# Table of Contents

**Section 1**  
**An Easier Way to Store, Process, Manage, and Analyze Data**  
page 03

**Section 2**  
**A Cloud Solution Designed for SMBs**  
page 05

**Section 3**  
**Your Personal DBA—in the Cloud**  
page 07

**Section 4**  
**Expert Insight**  
page 09

**Section 5**  
**One Database for All Your Business Needs**  
page 11

**Section 6**  
**SMB Use Cases: Oracle Autonomous Database in Action**  
page 14

**Section 7**  
**The Technology You Need to Boost Profitability**  
page 18

## Section 1

# An Easier Way to Store, Process, Manage, and Analyze Data

**T**oday's digital business models have leveled the playing field by enabling small and midsize businesses (SMBs) to compete with much larger firms. Yet while emerging technologies such as artificial intelligence, the Internet of Things, blockchain, and predictive analytics hold tremendous potential, they all have one pressing requirement: careful management of data, sometimes in explosive quantities. Even with a nimble workforce and expert database administrators (DBAs) on staff, tasks such as routine patching, tuning, scaling, and backups take a huge amount of time. Plus there is always the possibility of human error—and the associated risk of compliance violations.

Oracle Autonomous Database presents a compelling solution to this problem—and a better way to move complex data management activities to the cloud. Powered by embedded machine learning technology, this highly automated, self-driving database provides an easier way to store, process, manage, and analyze immense quantities of data.

One [benchmark](#) showed Oracle Autonomous Data Warehouse processed an analytics workload nine times faster, translating to eight times cheaper, than did Amazon's Redshift analytics database.



**Lower Costs**  
Automation reduces database and infrastructure costs by up to **80 percent**



**Reduce Risk**  
Vigilant monitoring, auto patching **eliminate** security risks



**Accelerate Innovation**  
SMBs gain more value from their data so they can **out-innovate** competitors



**Video: Oracle Autonomous Database**  
Larry Ellison, Oracle Executive Chairman and Chief Technology Officer, demonstrates Autonomous Database.

Oracle's automated database service is self-tuning and self-securing—it automatically applies security patches as soon as they are available. These autonomous management procedures help small businesses improve their cybersecurity defenses and eliminate manual, error-prone data-management processes. Instead of spending their time provisioning, patching, updating, backing up, tuning, and applying security patches, skilled technology workers can focus on obtaining insights from their data—and architecting new business applications.

## Section 2

# A Cloud Solution Designed for SMBs

**T**aking on established companies can be daunting, yet SMBs have a decisive advantage: because they are less encumbered by entrenched business practices, they can embrace new market opportunities quickly and often gain a first-mover advantage. Getting there involves astute use of emerging technologies—and the associated data.

The growing cost and complexity of hardware and software technology is motivating many small businesses to look to the cloud. By one count, 90 percent of companies with 100 to 499 employees are using cloud services in some capacity.<sup>1</sup>

According to a recent Harvard Business Review report, CIOs are increasingly cutting capital expenditures in favor of treating them as operational expenditures in favor of treating them as operational expenditures. The reason is clear: SMBs are reluctant to invest in on-premises systems, which frequently require specialized skills to run.<sup>2</sup>

<sup>1</sup>“The 4 Largest Small Business IT Trends to Watch for in 2018,” BizTech Magazine, December 2017.

<sup>2</sup> “Clearing a Path to Cloud Adoption,” Harvard Business Review, July 2017. [pub name per <https://hbr.org/sponsored/2017/07/clearing-a-path-to-cloud-adoption>]

Relying on a cloud provider accelerates the process of provisioning hardware and software infrastructure. However, in most cases, DBAs still have to install, manage, secure, tune, and scale a database platform. Most cloud providers simply shift the management responsibility to a new infrastructure. Cloud customers must keep the platform running efficiently.

By contrast, Oracle Autonomous Database runs itself, protects itself, and maintains itself with little or no human intervention. With this unique database cloud service, Oracle automates all database operations. For example, an AI-driven self-learning system allows the database to automatically optimize, secure, and tune itself for optimal performance. Unique machine learning algorithms constantly monitor the environment to eliminate cyberattacks on unpatched or unencrypted databases—the most common cause of data breaches.



## Round-the-Clock Vigilance

A Database That Learns, Adapts and Gets Smarter Over Time.

---

**Superb Performance**



The database automatically adapts to changing workloads

---

**Unwavering Security**



The database protects against external malicious attacks

---

**Always-on monitoring and diagnostics**



The database detects anomalies and fixes known issues

## Section 3

# Your Personal DBA—in the Cloud

**O**racle Autonomous Database is more than just a new way to store, process, and analyze data; it's a whole new approach to gaining value from your data—while reducing risk. It's like having your own expert DBA working for you all the time in the cloud. This unique autonomous database helps you automate your business in **four primary ways**:

**1** Always-on business operations keep your business applications running even during updates, without ever having to take them offline. Your systems will be more resilient and self-sufficient than ever before.

**2** Oracle's hyperattentive database diligently guards your data, assesses security alerts, and mitigates threats—around the clock.

**3** This self-aware database automatically monitors, repairs, and scales your critical database assets—and it never misses a backup.

**4** It monitors your business applications and automatically scales up your database resources to meet peak demands—then scales down those resources when they aren't needed. The database knows when you need more capacity and how to optimize performance, so you only pay for what you use.

# Do You Need an Autonomous Database?

If you aren't sure whether an autonomous database is for you, ask yourself **these questions**:

- Are you confident your database is secure from data theft, internal tampering, and cyberattacks?
- Is your organization struggling to keep up with IT demands for data management?
- Is a growing portion of your IT budget devoted to administering and maintaining databases?
- Does database provisioning and maintenance slow down your application deployments?
- Can you easily scale your databases to meet peak demands, and even shut down databases entirely to save costs—without impacting business continuity?

## Section 4

# Expert Insight

A Conversation with Dain Hansen

**A** ccording to Dain Hansen, Vice President of Product Marketing at Oracle, corporate data is doubling every two years. Nearly every organization is trying to figure out what to do with this data, including how to extract insights that will optimize efficiency, deliver better customer service, and create new revenue streams.

Oracle has been in the data management business for more than four decades and is well positioned to help small and midsize companies prosper from today's data deluge. "We can cut down the cost of administering corporate databases by 80 percent," Hansen says. "SMBs can apply the savings toward other strategic projects."

There are **three core attributes** of Oracle Autonomous Database that make these savings possible:

**Self-driving:** The database provisions, patches, tunes, and backs itself up. All manual functions are handled by the database—a huge boon for small companies with nominal IT resources.

**Self-securing:** The database applies all necessary database patches by itself. Your data is not left to chance whether to encrypt or when a security patch should be applied. Your data is secured from both external and internal bad actors.

**Self-repairing:** The database maximizes productivity with 99.995 percent uptime, which includes all planned and unplanned maintenance. This exceptional availability allows SMBs to pursue new business initiatives with confidence—and the knowledge that they won't let down their customers, partners, and employees.

“Database administrators no longer have to be bogged down with manual drudgery,” Hansen adds. “They can let the autonomous database handle these tasks automatically, and focus on strategic tasks such as application lifecycle management, data security, and data architecture.”

“Now, if a business user wants a database deployed for a particular need, it can be **available in minutes.**”

As Hansen explains, database administrators and other IT stakeholders can find new, more highly skilled roles as data architects. They can work more closely with application developers and line-of-business professionals. They can become data professionals rather than data administrators. “Speed of innovation is extremely important to small and midsize businesses,” he sums up. “Now, if a business user wants a database deployed for a particular need, it can be available in minutes.”



**Video: Oracle Autonomous Database—A Brief Overview**  
Oracle Senior Vice President Juan Loiza highlights capabilities that are enabling the Oracle Autonomous Database to be on autopilot.

## Section 5

# One Database for All Your Business Needs

**A**lthough Oracle Autonomous Database is new, it's built on dozens of automation features that Oracle has been developing and refining for more than 40 years. Now these enterprise capabilities are available to small and midsize businesses via a cloud database that utilizes the latest machine learning capabilities. Oracle's unique database service is available in **two cloud services**.

- 1 Oracle Autonomous Data Warehouse** is designed for rapid data access for analytics and data visualization to help you make timely informed, data-driven decisions.
- 2 Oracle Autonomous Transaction Processing** gives you a data management platform to develop and deploy new services such as accounting, procurement, sales automation and many other data-intensive business processes.



**Ideal for all types of business operations**



**One automated database for multiple needs**



**Instant provisioning to innovate faster**

## Get Smarter Data Insight Faster

Oracle Autonomous Data Warehouse lets you create an analytics database in the cloud instantly and populate it with data from a data warehouse or data lake. It includes sophisticated analytics functionality that helps you analyze real-time data, and to progress from reactive to proactive insight. For example, an online retailer could employ a dynamic pricing model that generates real-time offers based on up-to-the-minute web traffic. A hospitality provider could dynamically adjust room rates to ensure that all hotel inventory is sold before nightfall. Commonly called “perishable opportunities,” these business scenarios depend on close monitoring of real-time data, and the use of predictive analytics to reveal the likelihood of certain outcomes. Formerly the province of large companies with sophisticated technology environments, these real-time decision-making capabilities are now accessible to SMBs.



**Predictive analytics**



**Oracle Autonomous Data Warehouse**



**Real time data monitoring**

## Create New Business Services Faster

Oracle's modern data management solution is directly accessible to application developers as well as to line-of-business professionals within any function or discipline. Oracle's cloud-based tools make it easy to roll out new database applications, as well as to transfer existing ones to Oracle Cloud. Oracle cuts administrative costs and operational costs so you can free up dollars for new development.

- Developers gain on-demand access to a shared pool of database resources that can be provisioned as needed.
- DevOps teams can streamline the development, testing, deployment, and integration of new business applications, and provision database "sandboxes" to experiment with new applications and business scenarios.
- Line-of-business users can provision a database in minutes and immediately begin connecting applications to access and analyze data. Your valuable data will gain new relevance to the business community.



## Section 6

# SMB Use Cases: Oracle Autonomous Database in Action



### Case 01: Drop Tank

Comprehensive Support for Mixed Workloads

#### Organization

Drop Tank specializes in gas station loyalty technology and solutions, with thousands of participating locations. The small but rapidly growing company, partners with fuel marketers and convenience stores to deploy consistent loyalty capabilities in conjunction with a wide range of data services for consumer package goods companies.

#### Challenge

Previously, Drop Tank used on-premises databases and management software. As the company grew, maintaining this complex IT environment became progressively more difficult.

### Solution

DropTank is using Oracle Cloud services, anchored by Oracle Autonomous Database, to create new loyalty solutions for gas station operators. Analytics insights from Oracle Autonomous Data Warehouse help partners understand and influence consumer purchase behavior. DropTank can stand up a new data warehouse in one hour and pull useful business information from it within four hours. In addition, DropTank plans to use Oracle Autonomous Transaction Processing to process a huge and growing volume of point-of-sale transactions.

### Success

DropTank can more easily capture point-of-sale data to unlock customer insights. Everybody in its interlinked value chain wins: Gas stations can boost sales and drive repeat business through greater customer loyalty, consumer package goods companies can stock the items that sell well and yield the best margins, and consumers are happy to find their favorite products on the shelves.

“We’re not a large company, and as we grow we don’t want to have to hire a team of database administrators to manage databases, update software, and create tables and indexes. Oracle Autonomous Data Warehouse allows us to focus on analyzing the data rather than on managing systems.”

—Tim Miller, CTO, Drop Tank

“We’re seeing a future that involves a lot more transactions, a lot more data, and a lot more need to make use of that data in order for us to be efficient. Oracle Autonomous Data Warehouse has an incredible ability to scale.”

—David VanWiggeren, CEO, Drop Tank



## Case 02: DX Marketing

Instant Provisioning for Rapid Application Development

### Organization

DXM is an award-winning insights company that leverages unique consumer knowledge to inform business strategy and provide a quantifiable ROI on marketing spend.

### Challenge

DX Marketing wanted to build a data management platform that nontechnical people could use without IT assistance. It also wanted to migrate its existing analytics services to a cloud environment without major changes to its Oracle Database.

### Solution

DX Marketing subscribed to Oracle Autonomous Data Warehouse in conjunction with Oracle Advanced Analytics, which provides analytics and data management in one cohesive cloud environment.

Oracle Autonomous Data Warehouse makes it easy for users to conduct their own analyses, and it only takes a few days to accomplish what used to take several weeks with a third-party cloud provider. Everything runs in the database in Oracle Cloud—there is no hardware or software to manage, and no database to administer.

### Success

Thanks to the consistency between all versions and options of Oracle Database—on-premises and in the cloud—all of DX Marketing’s database investments can be moved to Oracle Autonomous Data Warehouse without change. Business owners avoided the expense of hiring new IT staff and acquiring new infrastructure, freeing up funds to hire a data scientist and focus on cultivating top-grade analytics talent.

“Database management is automated. Plus, we don’t have an external system pulling data down, processing it, and putting it back, which alleviates any kind of network latency.”

—Jerry Gearding, Chief Technology Officer, DX Marketing



### Case 03: Data Intensity

Data for Departmental and Mission-Critical Apps

#### Organization

Data Intensity is a managed services provider focused on supporting mission-critical applications in a hybrid cloud world. With more than 17 years of industry experience, 650 customers, and 15,000 managed environments under its belt, the company delivers purpose-built solutions as well as design, implementation, migration, maintenance, and support services.

#### Challenge

Analysts on Data Intensity’s finance team were spending 60 percent of their time getting data out of their information systems, which only left 40 percent of their time to analyze financial data and generate value for the business. .

#### Solution

Data Intensity chose Oracle Autonomous Data Warehouse and Oracle Analytics to automate data access, analysis, and visualization activities.

It found these cloud services quick to deploy, and they meshed nicely with Data Intensity’s agile development approach. Now the company’s financial analysts can instantly deploy new data warehouses and scale them up or down to accommodate workload spikes during busy financial reporting periods.

#### Success

Since implementing Oracle Autonomous Data Warehouse, Data Intensity has saved an estimated US\$250,000 in hardware and software outlays, even though 10 times as many people are accessing the system. These workers can instantly conduct valuable analyses rather than spending an inordinate amount of time getting data out of the system.

**“The flexibility of Oracle Autonomous Data Warehouse is amazing. We can scale the solution up during busy financial reporting periods, and when we scale it back down we’re barely paying anything. Plus we don’t have to administer the database.”**

**—James Anthony, Chief Technology Officer, Data Intensity**

Section 7

# The Technology You Need to Boost Profitability

**S**MBs need sophisticated technology to become market leaders—and keep up with escalating business demands. Rapidly growing businesses such as DropTank, DX Marketing, and Data Intensity see the advantages of Oracle Autonomous Database—the world’s first self-driving database. While these three companies each have unique business objectives, they all excel with what Oracle Autonomous Database has to offer:



**Keeping costs down**



**Reducing security and compliance risks**



**Accelerating innovation**

## So what do you have to lose?

Get started with Oracle Cloud with  
US\$300 in free credits

[#thinkautonomous](#)



Copyright © 2019, Oracle and/or its affiliates. All rights reserved. Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.