FORRESTER®

The Forrester Wave™: Database-As-A-Service, Q2 2017

Automation, Lower Cost, And Flexibility Are Driving Increasing Adoption

by Noel Yuhanna
April 24, 2017

Why Read This Report

Database-as-a-service (DBaaS) has become critical for every organization to support new and growing data management requirements. These platforms provide faster provisioning, unlimited elastic scale, and continuous availability for EA pros to drive innovation and growth. Forrester identified the 13 most significant DBaaS vendors — Amazon Web Services (AWS), CenturyLink, Citus Data, ClearDB, EnterpriseDB, Google, IBM, Microsoft, MongoDB, Oracle, Rackspace, Redis Labs, and SAP — and researched, analyzed, and scored them against 30 criteria.

Key Takeaways

Thirteen DBaaS Vendors Compete In This Hot Market
Among the commercial and open source DBaaS vendors Forrester evaluated, we found three Leaders, five Strong Performers, four Contenders, and one Challenger.

EA Pros Are Looking For Automation, Low-Cost, Security, And Performance Features
The DBaaS market is growing because more enterprise architecture (EA) professionals see DBaaS as a way to address their top database challenges.

Scalability, Performance, Automation, And Availability Are Key Differentiators
The Leaders we identified offer high-end performance and scale, support broad use cases, and deliver high degree of automation. The Strong Performers have turned up the heat as high as it will go on the incumbent Leaders, and Contenders are ramping up their services to offer automation and simplified access.

The Forrester Wave™: Database-As-A-Service, Q2 2017

Automation, Lower Cost, And Flexibility Are Driving Increasing Adoption

by Noel Yuhanna
with Gene Leganza and Emily Miller
April 24, 2017

Table Of Contents

Related Research Documents

FORRESTER®

FOR ENTERPRISE ARCHITECTURE PROFESSIONALS

The Forrester Wave™: Database-As-A-Service, Q2 2017
Automation, Lower Cost, And Flexibility Are Driving Increasing Adoption

April 24, 2017

Database-As-A-Service Has Become Critical For All Enterprises

EA pros are increasingly looking to cloud platforms as the most agile way to deliver new capabilities and services to the business. DBaaS is a rapidly evolving cloud platform that delivers a database repository with automated provisioning, backup, elastic scale, and integrated security to support any kind of business application, whether transactional, operational, or analytical. Cloud databases abstract away many of the operational challenges when supporting customer-focused or internal business applications by providing databases running on scalable storage and compute resources fully managed by the provider. These services automate database provisioning, administration, backup, recovery, availability, security, and scalability without the need for a database administrator or other technical resources. In addition, DBaaS helps enterprises migrate from on-premises databases to the cloud so they can save money, support elastic scale to meet increasing user and workload growth, deliver an integrated data repository, and drive innovation to support an enhanced customer experience.

DBaaS Has Come A Long Way In A Short Time

Forrester defines database-as-a-service as:

> *On-demand, secure, and scalable self-service databases that automate provisioning and administration to support new and existing applications and systems of insight.*
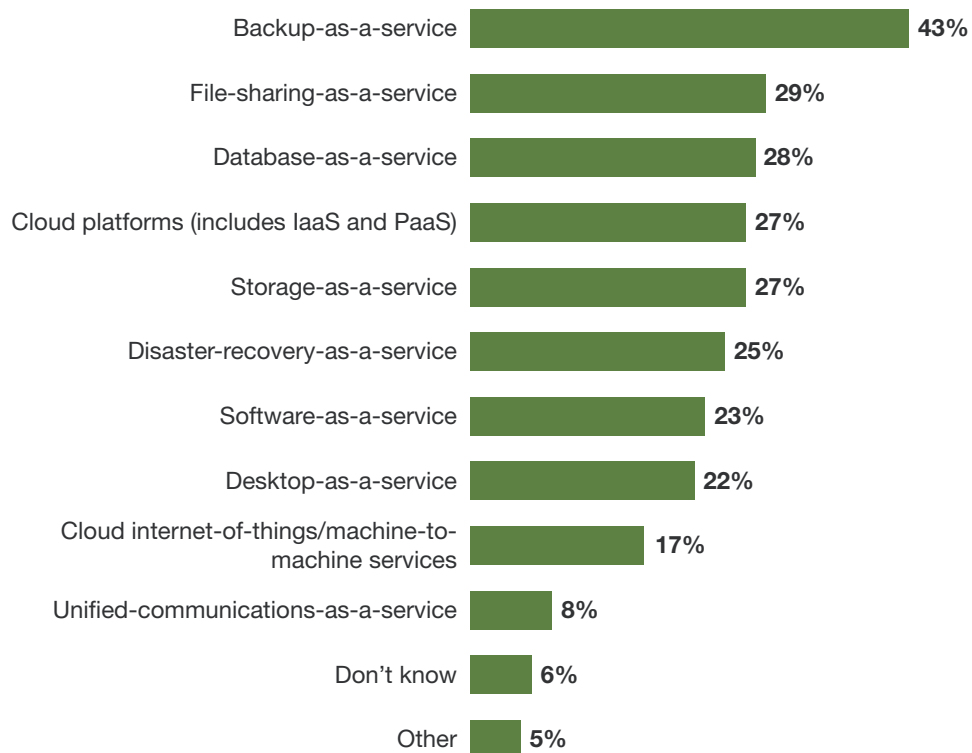
Just a few years ago, most deployments were smaller to midsized. Today, we are seeing hundreds of large enterprises deploying terabyte-sized, mission-critical databases. Around 28% of global infrastructure decision makers claim they are already supporting a DBaaS deployment; Forrester predicts that this number will likely double over the next four years (see Figure 1). In addition, 43% of global data and analytics decision makers say their companies will increase their data management investment in the public cloud by 5% to 10% over last year's deployments, and a further 16% project a greater than 10% increase (see Figure 2). The types of use cases that organizations are supporting have grown significantly, beyond test and development, backups, archiving, and non-mission-critical applications to more sophisticated and complex deployments. The leading DBaaS applications deployed by organizations include:

› **Consumer personalization apps.** It's the age of the customer, and customer knowledge is essential for any business to succeed. An enormous volume of consumer-generated content is already in the cloud from social media sites like Facebook, LinkedIn, and Twitter. DBaaS offers the ability to store, process, and access customer data in the cloud to support consumer personalization applications.

› **Internet-of-things (IoT) applications.** DBaaS enables enterprise architects to build IoT applications that keep data from connected devices in the cloud. For example, large manufacturers deploying hundreds of sensors on equipment and generating huge volumes of data can run analytics in the cloud from DBaaS-based data.

FOR ENTERPRISE ARCHITECTURE PROFESSIONALS

The Forrester Wave™: Database-As-A-Service, Q2 2017
Automation, Lower Cost, And Flexibility Are Driving Increasing Adoption

April 24, 2017

› **Mobile apps.** Many of today's mobile apps require data from multiple sources, such as customer databases, transaction systems, and log files. Cloud databases offer a great platform for storing, processing, and accessing unified data to support quicker deployment of mobile applications. In addition, cloud databases can support seasonal usage demand or deal with unpredictable workload growth.

› **Line-of-business (LOB) collaboration.** With departments collaborating more frequently than ever, sharing customer and business data has become critical. DBaaS platforms help LOBs collaborate by storing commonly used data in the cloud, which can then be accessed by internet browsers or apps based on smartphones, tablets, and wearables.

FIGURE 1 EA Pros Are Using Database-As-A-Service To Support Mission-Critical Applications

"Which of the following cloud services do you use?"

Backup-as-a-service	43%
File-sharing-as-a-service	29%
Database-as-a-service	28%
Cloud platforms (includes IaaS and PaaS)	27%
Storage-as-a-service	27%
Disaster-recovery-as-a-service	25%
Software-as-a-service	23%
Desktop-as-a-service	22%
Cloud internet-of-things/machine-to-machine services	17%
Unified-communications-as-a-service	8%
Don't know	6%
Other	5%

Base: 1,285 global infrastructure business decision makers
Source: Forrester Data Global Business Technographics® Infrastructure Survey, 2016

FOR ENTERPRISE ARCHITECTURE PROFESSIONALS

The Forrester Wave™: Database-As-A-Service, Q2 2017
Automation, Lower Cost, And Flexibility Are Driving Increasing Adoption

April 24, 2017

FIGURE 2 EA Pros Are Increasing Their Investments In Database-As-A-Service In 2017

"To the best of your knowledge, how much do you expect your firm's data management, in terms of database-as-a-service, in the public cloud to change over the next year?"

Increase by more than 10%	**16%**
Increase by 5% to 10%	**43%**
Stay about the same	**34%**
Decrease by 5% to 10%	**5%**
Don't know	**2%**
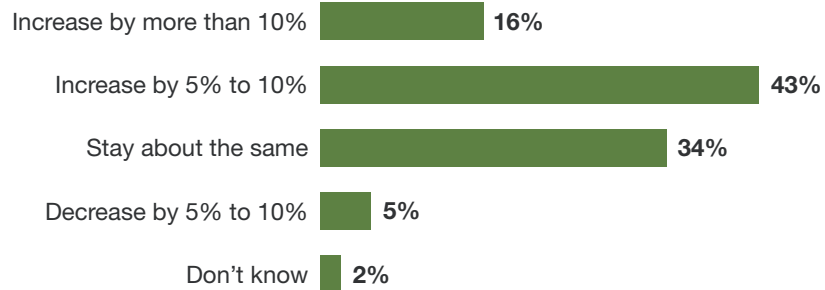
Base: 1,006 global data and analytics technology decision makers who use or have purchase influence over data and analytics in the public cloud

Source: Forrester Data Global Business Technographics® Data And Analytics Survey, 2016

Vendors Often Provide Better Performance Than What's Guaranteed In Contracts

Most organizations we've spoken with are satisfied with their current availability for their DBaaS deployment. This aligns well with vendors' claims of delivering higher uptime than the SLAs they advertise.[1] However, in some cases, SLAs are not the same as actual availability. Customers should focus on what vendors have actually delivered in addition to what is stated in an SLA. For example, AWS guarantees 99.95% availability in the Amazon RDS SLA; however, AWS claims that Amazon RDS for Aurora operates at 99.999% availability fleetwide.[2] Some vendors deliver less availability than the SLA states, which can be problematic when the refunds involved are a small fraction of the cost of downtime. While this evaluation's scoring primarily focuses on SLAs guaranteed in contracts, as opposed to uptime claims by a vendor, we encourage EA pros to speak with DBaaS vendors about the current service uptime and compensation offered when SLAs are not achieved, whether in service credits or monthly bill discounts. In addition, look at building a highly resilient cloud database deployment by employing multiple instances across multiple availability zones or regions as well as data replication to achieve SLAs of 99.999% availability or greater.

FOR ENTERPRISE ARCHITECTURE PROFESSIONALS

The Forrester Wave™: Database-As-A-Service, Q2 2017
Automation, Lower Cost, And Flexibility Are Driving Increasing Adoption

April 24, 2017

Database-As-A-Service Evaluation Overview

To assess the state of the DBaaS market and see how the vendors stack up against each other, Forrester evaluated the strengths and weaknesses of top DBaaS vendors. After examining past research, user need assessments, and vendor and expert interviews, we developed a comprehensive set of 30 evaluation criteria, which we grouped into three high-level buckets:

› **Current offering.** To assess the breadth and depth of each vendor's DBaaS services offering, we evaluated each solution's architectural and operational functionality.

› **Strategy.** We reviewed each vendor's strategy to assess how it plans to evolve its DBaaS services to meet emerging customer demands. We also evaluated each vendor's go-to-market approach, commitment, and direction strategies.

› **Market presence.** To establish market presence, we evaluated each DBaaS provider's company financials, adoption, and partnerships.

Evaluated Vendors And Inclusion Criteria

Forrester included 13 vendors in this assessment: Amazon Web Services, CenturyLink, Citus Data, ClearDB, EnterpriseDB, Google, IBM, Microsoft, MongoDB, Oracle, Rackspace, Redis Labs, and SAP. Each of these vendors has (see Figure 3):

› **A comprehensive DBaaS offering.** The vendors included in this evaluation must provide a DBaaS offering with the ability to store, process, and access objects, tables, and content in the public cloud as well as the ability to provision, secure, back up, recover, integrate, and administer databases in the public cloud.

› **On-demand provisioning.** Database consumers, such as application developers, testers, and enterprise architects, must be able to provision databases easily using an on-demand self-service platform. Business users, analysts, and other nontechnical users should be able to build and use databases without having the requisite technical knowledge.

› **On-demand scale.** The DBaaS offering must deliver an elastic, on-demand database platform that can expand and contract its compute and storage resources dynamically based on business application and insights requirements.

› **Automatic administration and monitoring.** A key feature of the DBaaS products in this Forrester Wave is the ability to automate the administration and monitoring of databases, such as backup, recovery, tuning, optimization, patching, upgrading, and creation. Based on business policies, tasks must be automatable — scheduled or proactively initiated — to support various business needs.

› **Chargeback.** The products must offer metering of database usage that allows for chargeback to various consumers or groups in an organization. For example, marketing might use a database for customer personalization, while engineers use the same database to store product blueprints. In this case, chargeback is done based on usage of these groups.

FOR ENTERPRISE ARCHITECTURE PROFESSIONALS

April 24, 2017

The Forrester Wave™: Database-As-A-Service, Q2 2017
Automation, Lower Cost, And Flexibility Are Driving Increasing Adoption

› **A standalone DBaaS offering.** The vendors included in this evaluation provide DBaaS services that are independent of other SaaS, PaaS, and IaaS offerings.[3] The solution should not be technologically tied or bundled to any particular application, product, or solution but be used purely as database service. The vendor must market the DBaaS like a standalone service and price it per usage.

› **A referenceable install base.** There should be 10 or more unique, paying enterprise customers using the DBaaS service that span more than one major geographical region. Each vendor provided at least two customer references for Forrester to interview.

› **Customer interest.** Forrester included only vendors that have been mentioned by 10 unique customers in the past 12 months during Forrester inquiry calls related to cloud database topics.

› **Client inquiries and/or technologies that put the vendor on Forrester's radar.** Forrester clients often discuss the vendors and products through inquiries and interviews; alternatively, the vendor may, in Forrester's judgment, warrant inclusion or exclusion in this evaluation because of technology trends, customer interactions, and/or market presence.

FOR ENTERPRISE ARCHITECTURE PROFESSIONALS

The Forrester Wave™: Database-As-A-Service, Q2 2017
Automation, Lower Cost, And Flexibility Are Driving Increasing Adoption

April 24, 2017

FIGURE 3 Evaluated Vendors: Product Information And Selection Criteria

Vendor	Product evaluated	Product version evaluated
Amazon Web Services (AWS)	Amazon RDS, Amazon DynamoDB, Amazon Aurora, Amazon Redshift, Amazon ElastiCache	
CenturyLink	RelationalDB	
Citus Data	Citus Cloud	1.0
ClearDB	ClearDB DBaaS	
EnterpriseDB	PostgresPlus Cloud Database (PPCD) and EDB Ark with EDB Postgres	PPCD 1.4, EDB Ark 2.0
Google	BigQuery, Cloud SQL, Cloud Bigtable, Cloud Datastore	
IBM	IBM Compose	
Microsoft	Azure SQL Database	
MongoDB	MongoDB Atlas	
Oracle	Oracle Database Cloud Service	16.4.3
Rackspace	Rackspace Managed Data Services	
Redis Labs	Redis Cloud	4.3
SAP	SAP Cloud Platform	

Vendor inclusion criteria

1) A comprehensive DBaaS offering, including on-demand provisioning, scale, automatic administration and monitoring, and chargeback.

2) A standalone DBaaS offering.

3) A referenceable install base.

4) A publicly available DBaaS product.

5) Customer interest.

6) Client inquiries and/or technologies that put the vendor on Forrester's radar.

FOR ENTERPRISE ARCHITECTURE PROFESSIONALS

The Forrester Wave™: Database-As-A-Service, Q2 2017
Automation, Lower Cost, And Flexibility Are Driving Increasing Adoption

April 24, 2017

Vendor Profiles

This evaluation of the DBaaS market is intended to be a starting point only. We encourage clients to view detailed product evaluations and adapt criteria weightings to fit their individual needs through the Forrester Wave Excel-based vendor comparison tool (see Figure 4).

FIGURE 4 Forrester Wave™: Database-As-A-Service, Q2 '17
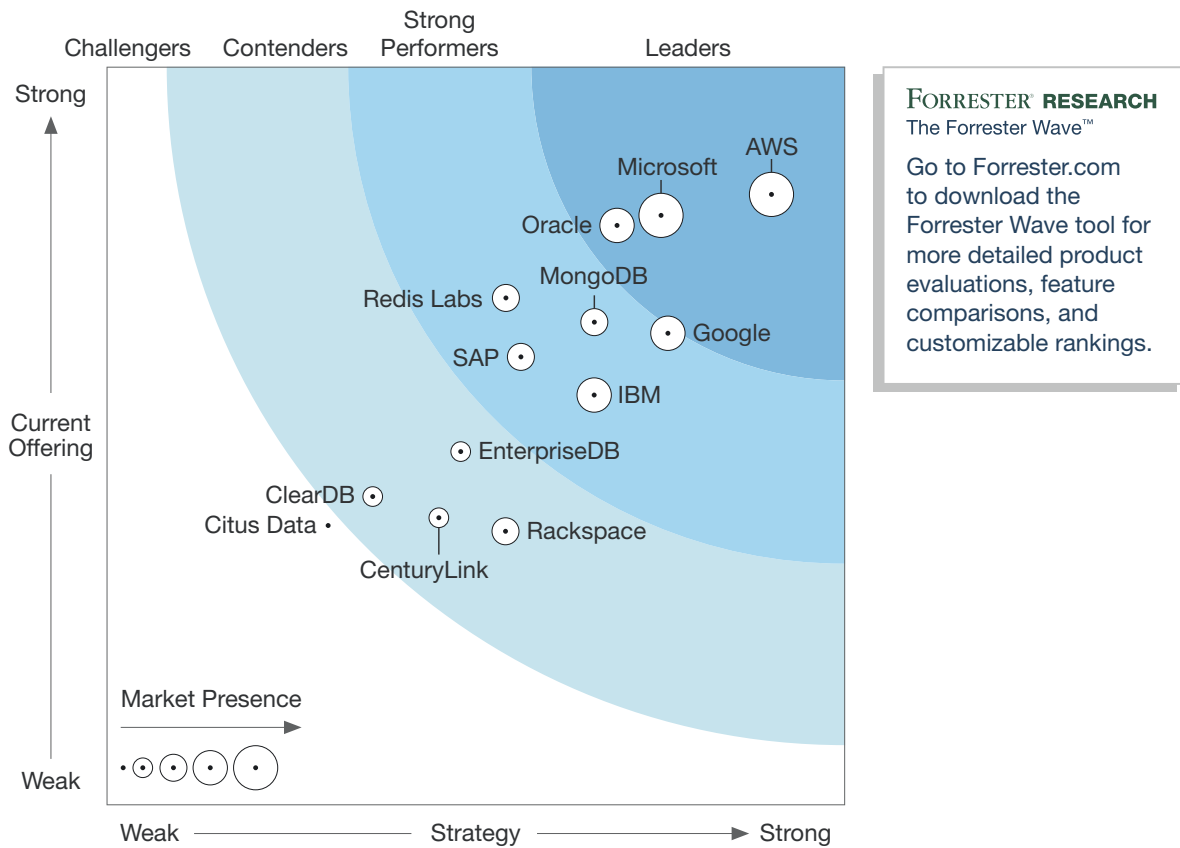
FOR ENTERPRISE ARCHITECTURE PROFESSIONALS

The Forrester Wave™: Database-As-A-Service, Q2 2017
Automation, Lower Cost, And Flexibility Are Driving Increasing Adoption

April 24, 2017

FIGURE 4 Forrester Wave™: Database-As-A-Service, Q2 '17 (Cont.)

	Forrester's weighting	AWS	CenturyLink	Citus Data	ClearDB	EnterpriseDB	Google	IBM	Microsoft	MongoDB	Oracle	Rackspace	Redis Labs	SAP
Current Offering	50%	4.13	1.94	1.89	2.09	2.39	3.19	2.77	3.99	3.27	3.92	1.85	3.43	3.03
Architecture	15%	2.80	1.50	1.60	3.50	1.90	2.20	3.00	3.60	1.90	1.60	2.70	3.00	2.50
Development	25%	3.40	1.60	1.60	1.60	2.40	3.60	2.80	5.00	4.20	5.00	1.60	3.60	4.20
Performance and scale	20%	4.30	1.60	1.70	2.30	1.80	3.50	2.10	3.50	2.90	3.90	2.00	3.20	1.60
Provisioning and administration	15%	5.00	2.60	2.40	3.00	2.60	3.40	3.00	5.00	4.00	4.00	2.60	3.60	2.20
Data security	25%	5.00	2.40	2.20	1.00	3.00	3.00	3.00	3.00	3.00	4.20	1.00	3.60	3.80
Strategy	50%	4.50	2.25	1.50	1.80	2.40	3.80	3.30	3.75	3.30	3.45	2.70	2.70	2.80
Pricing/licensing	10%	3.00	3.00	3.00	3.00	3.00	5.00	3.00	3.00	3.00	3.00	3.00	3.00	1.00
Ability to execute	30%	5.00	3.00	1.00	1.00	1.00	3.00	3.00	5.00	3.00	5.00	3.00	1.00	3.00
Road map	30%	5.00	1.00	1.00	1.00	3.00	5.00	3.00	5.00	3.00	3.00	3.00	3.00	3.00
Open source	15%	3.00	0.00	3.00	3.00	3.00	1.00	3.00	0.00	3.00	0.00	1.00	3.00	1.00
Support	15%	5.00	5.00	1.00	3.00	3.00	5.00	5.00	3.00	5.00	5.00	3.00	5.00	5.00
Market Presence	0%	5.00	1.20	1.00	1.20	1.20	3.50	3.20	5.00	2.40	4.00	2.30	2.10	2.90
Product revenue	25%	5.00	1.00	1.00	1.00	1.00	3.00	3.00	5.00	1.00	3.00	1.00	1.00	3.00
Installed base	25%	5.00	1.00	1.00	1.00	1.00	1.00	3.00	5.00	1.00	3.00	3.00	3.00	1.00
Market awareness	30%	5.00	1.00	1.00	1.00	1.00	5.00	3.00	5.00	3.00	5.00	3.00	1.00	3.00
Partnerships	10%	5.00	1.00	1.00	1.00	1.00	5.00	3.00	5.00	5.00	5.00	1.00	3.00	5.00
Reach	10%	5.00	3.00	1.00	3.00	3.00	5.00	5.00	5.00	5.00	5.00	3.00	5.00	5.00

All scores are based on a scale of 0 (weak) to 5 (strong).

FOR ENTERPRISE ARCHITECTURE PROFESSIONALS

The Forrester Wave™: Database-As-A-Service, Q2 2017
Automation, Lower Cost, And Flexibility Are Driving Increasing Adoption

April 24, 2017

Leaders

› **Amazon Web Services has the broadest range of databases and the largest adoption.** AWS not only has the largest adoption of DBaaS, it also offers the widest range of offerings to support analytical, operational, and transactional workloads. AWS database services include Amazon RDS, which supports six commonly used databases — including Amazon Aurora, a MySQL-compatible database. AWS also offers Amazon DynamoDB, a flexible NoSQL database; Amazon Redshift, a petabyte-scale data warehouse service; and Amazon ElastiCache, an in-memory cache that supports Memcached and Redis. The AWS Database Migration Service makes it easy and inexpensive to migrate databases to the AWS cloud. AWS's key strengths lay in its dynamic scale, automated administration, flexibility of database offerings, strong security, and high-availability capabilities, which make it a preferred choice for customers. The vendor's road map focuses on further improvements in automation, performance, and security.

› **Microsoft offers a mature, scalable, secure, and compelling offering.** Microsoft first launched its DBaaS in 2010, and since then it has gone through several iterations to make the platform more scalable, better performing, and secure. Microsoft also offers Azure Data Warehouse, a managed data warehouse built on the SQL platform that is ramping up in adoption. The Azure SQL Database includes built-in intelligence that learns app patterns and adapts to maximize performance, reliability, and security. Overall, Azure SQL Database has done well with broad levels of deployments across various verticals and use cases. Customers use Azure SQL Database to support eCommerce, web and mobile apps, and other enterprise applications. Customers like Microsoft Azure's scale, automation, and security, but they are concerned about access latency and higher costs, especially as additional backup, disaster recovery, and premium performance features are added.

› **Oracle's ramping up of its DBaaS offering challenges established players.** Oracle Cloud provides several Oracle Cloud Service deployment choices that allow enterprises to start at the capability level suitable for their use case. Choices include single schemas, dedicated pluggable databases, virtualized databases, bare-metal databases, and databases running on engineered infrastructure. With Database Cloud Service, EA pros get the same Oracle database features and functionality available on-premises. Customers across vertical industries say they are running all kinds of workloads, including transactional, operational, and analytical. With Oracle, EA pros can choose from 1) a dedicated database instance with direct network connections and full administrative control or 2) a dedicated schema with full development and deployment platform managed by Oracle. Enterprise customers like Oracle's performance, scale, automation, and pricing; however, some have complained that technical support has not matched the support for Oracle's on-premises service.

FOR ENTERPRISE ARCHITECTURE PROFESSIONALS

The Forrester Wave™: Database-As-A-Service, Q2 2017
Automation, Lower Cost, And Flexibility Are Driving Increasing Adoption

April 24, 2017

Strong Performers

› **Google Cloud Platform's DBaaS solutions are ramping up aggressively.** Google's cloud database strategy centers on four major products: Google Cloud SQL, a MySQL compatible relational database; BigQuery, a cloud data warehouse for running queries on large data sets; Google Cloud Datastore, a managed NoSQL database; and Google Cloud Bigtable, a fully managed, scalable NoSQL database for large analytical and operational workloads. Google Cloud SQL is a fully managed database service that allows users to create, configure, and use MySQL databases in Google Cloud Platform. Enterprise customers like the performance, scale, ease of use, and degree of automation that Google Cloud Platform brings, yet a few have complained about its high cost, the lack of a broad security offering, and concerns about vendor lock-in. Google also recently announced distributed relational database Google Cloud Spanner and Google Cloud SQL for PostgreSQL. Firms that need a scalable DBaaS to build modern applications should shortlist Google Cloud Platform.

› **MongoDB adds DBaaS capabilities and is gaining momentum quickly.** MongoDB continues to be the most popular NoSQL database for supporting new, next-generation business applications. MongoDB Atlas is a cloud-hosted database service introduced in June 2016 to support an automated, managed DBaaS for MongoDB environments. Besides MongoDB Atlas, MongoDB offers Cloud Manager, a cloud-hosted platform for managing MongoDB deployments. MongoDB Atlas is currently available on AWS and will support other cloud platforms in the near future. Although MongoDB Atlas is a late arrival to the market, customers claim to have had a good experience so far with its easy-to-use platform and good pricing model. However, some organizations say that the platform's security is average when compared with other DBaaS solutions.

› **Redis Labs offers a viable, highly available solution with low price for the performance.** Redis Cloud offers fully managed services that provide automated provisioning, administration, and management of Redis databases in various cloud platforms, including AWS, Microsoft Azure, Google Cloud Platform, and IBM SoftLayer. Redis Cloud provides various data persistence options as well as remote backup for disaster recovery. A Redis database is created in seconds, and from that moment on, all operations are fully automated. The service completely frees developers from dealing with nodes, clusters, scaling, data-persistence configuration, and failure recovery, while guaranteeing no data loss. Enterprises use Redis to support real-time analytics, high-volume transactions, social applications, operational reporting, and mobile applications. Enterprise customers like Redis Cloud's ease of use, scale, and high-availability functionality.

› **IBM offers several DBaaS solutions for enterprises.** IBM's DBaaS offerings include Cloudant, a managed NoSQL database; IBM Graph, a managed graph database; dashDB, a managed cloud data warehouse; and IBM Compose, a managed platform on open source database technologies, which we've evaluated here. Compose, which IBM acquired in 2015, is a multitenant and dedicated database service that assists with scaling, high availability, failover, backups, security, and administration. IBM Compose supports several open source databases including Elasticsearch,

FOR ENTERPRISE ARCHITECTURE PROFESSIONALS

The Forrester Wave™: Database-As-A-Service, Q2 2017
Automation, Lower Cost, And Flexibility Are Driving Increasing Adoption

April 24, 2017

MySQL, Redis, PostgreSQL, and MongoDB on IBM SoftLayer, IBM Bluemix, AWS, and Google Cloud Platform. IBM also offers Compose Enterprise, which enables running databases on dedicated hardware with full self-service capabilities like that on multitenant platforms. Customers like IBM Compose's scale, performance, and automation, but some cited high cost and latency issues. IBM's road map includes further enhancements for performance, scale, security, automation, and additional databases.

› **SAP Cloud Platform supports various enterprise applications.** SAP Cloud Platform is a managed self-service platform that includes infrastructure services, HANA database services, and HANA App Services that run on various cloud providers such as AWS, Microsoft Azure, and Google Cloud Platform. SAP Cloud Platform is an open, standards-based, and modular PaaS for rapid development for on-demand applications. Unlike other DBaaS vendors, SAP focuses on delivering the platform with various services to support building applications more quickly. Firms use SAP Cloud Platform to support departmental data marts, real-time analytics, SAP enterprise resource planning (ERP) extensions, and next-generation applications powered by SAP HANA. Enterprise customers like the performance, security, and support for Cloud Platform, but they claim that it still lags in ease of use, automation, and high-end scale capabilities. SAP's road map includes enhancing performance, scale, security, governance, and integration.

Contenders

› **EnterpriseDB is a viable option with many use cases for PostgreSQL cloud databases.** EnterpriseDB Ark is a cloud framework to support provisioning, administration, and management of enterprise databases in various cloud platforms, including AWS and Rackspace. With EnterpriseDB Ark, all of the setup, maintenance, backup, and monitoring is done using web-based graphical interface that is automated and simple to use. The database will scale automatically to support spikes in demand for processing power according to preset parameters. Customers praised its automation, easy setup, and performance capabilities, but others expressed concerns about slightly higher costs than other solutions, a less-than-comprehensive security offering, and high-end scale issues. Firms looking to migrate on-premises PostgreSQL databases to the cloud should consider EnterpriseDB Ark.

› **Rackspace's Managed Data Services offering is evolving rapidly.** Rackspace provides solutions ranging from self-managed to fully managed DBaaS offerings for popular databases including Elasticsearch, MariaDB, MongoDB, MySQL, Oracle, Redis, and SQL Server. Rackspace offers DBaaS for multi- and single-tenant instances on dedicated servers. It offers fully managed services on AWS, Microsoft Azure, and Rackspace as well as on-premises at customer-designated locations. The vendor offers container-based virtualization, which enables the database to operate at near bare-metal speed while isolating CPU, memory, network, and infrastructure resources. Customers reported great interactions as Rackspace solved their challenges and business problems with help at each stage. Enterprises like Rackspace's support, simple and easy-to-use database services, and performance. However, some organizations have reported latency issues with larger data sizes, limited use cases, and lack of strong security features.

FOR ENTERPRISE ARCHITECTURE PROFESSIONALS

The Forrester Wave™: Database-As-A-Service, Q2 2017
Automation, Lower Cost, And Flexibility Are Driving Increasing Adoption

April 24, 2017

› **CenturyLink is a late entrant, but its flexible configuration is driving adoption.** CenturyLink launched its RelationalDB service in January 2016 with support for MySQL and Microsoft SQL Server, with future plans to include others. Unlike most other DBaaS platforms, CenturyLink's is designed to support a flexible, on-demand database environment with any combination of scale of CPU, RAM, and storage that the customer needs. It also features configurable daily backups, SSL certificates, and high availability with in-data center replication and autofailover. CenturyLink also offers NoSQL Orchestrate, which the company acquired to support organizations looking for flexible NoSQL database services. Customers like its competitive pricing model (hourly billing with no commitments) as well as its reliable back-end infrastructure and flexible provisioning options. Enterprises that want a more flexible DBaaS service that caters to their resource requirements should certainly shortlist CenturyLink.

› **ClearDB offers low-cost services for MySQL across major cloud platforms.** ClearDB has been providing cloud-based MySQL database services since its inception in 2010. Its services provide customers with SLA-backed high availability, simplicity, easy administration, and efficiency on major cloud platforms, including AWS and Microsoft Azure, as well as on on-premises data centers. ClearDB offers four distinct services to help with deployments, ranging from community tier to custom tier. Although some customers have expressed concerns about its security not being comprehensive enough to meet their critical business needs and have reported access latency — especially in multiterabyte-sized deployments — we believe ClearDB will likely overcome these issues as adoption grows. Overall, ClearDB is a viable option, especially for on-premises MySQL customers that see the cloud as an option to extend their platform or build new small to moderate-sized cloud-based applications.

Challengers

› **Citus Data is a viable option for small to midsized requirements.** Citus Cloud is a distributed database that extends PostgreSQL, allowing enterprises to leverage relational capabilities to support various types of applications in the cloud or on-premises. The platform delivers simple provisioning, granular access control, and protection to support various workloads. It provides a database that scales out across commodity servers and that processes queries in parallel across the cluster nodes to support analytics and operational insights. Some of its core features include elastic compute scaling, transparent sharding, and integrated row and column storage. Companies use Citus Data across several verticals including retail, adtech, eCommerce, telecom, and manufacturing. While Citus Data's cloud offering is still evolving, a few customers claim to have run into technical and availability issues that are affecting larger deployments. Overall, Citus Data is good choice for small to moderate-sized databases, test and development environments, and operational workloads.

FOR ENTERPRISE ARCHITECTURE PROFESSIONALS

April 24, 2017

The Forrester Wave™: Database-As-A-Service, Q2 2017
Automation, Lower Cost, And Flexibility Are Driving Increasing Adoption

Engage With An Analyst

Gain greater confidence in your decisions by working with Forrester thought leaders to apply our research to your specific business and technology initiatives.

Analyst Inquiry

To help you put research into practice, connect with an analyst to discuss your questions in a 30-minute phone session — or opt for a response via email.

Learn more.

Analyst Advisory

Translate research into action by working with an analyst on a specific engagement in the form of custom strategy sessions, workshops, or speeches.

Learn more.

Webinar

Join our online sessions on the latest research affecting your business. Each call includes analyst Q&A and slides and is available on-demand.

Learn more.

Forrester's research apps for iPhone® and iPad®
Stay ahead of your competition no matter where you are.

Supplemental Material

Online Resource

The online version of Figure 4 is an Excel-based vendor comparison tool that provides detailed product evaluations and customizable rankings.

Data Sources Used In This Forrester Wave

Forrester used a combination of three data sources to assess the strengths and weaknesses of each solution. We evaluated the vendors participating in this Forrester Wave, in part, using materials that they provided to us by December 21, 2016.

› **Vendor surveys.** Forrester surveyed vendors on their capabilities as they relate to the evaluation criteria. Once we analyzed the completed vendor surveys, we conducted vendor calls where necessary to gather details of vendor qualifications.

FOR ENTERPRISE ARCHITECTURE PROFESSIONALS

The Forrester Wave™: Database-As-A-Service, Q2 2017
Automation, Lower Cost, And Flexibility Are Driving Increasing Adoption

April 24, 2017

› **Product demos.** We asked vendors to conduct demonstrations of their products' functionality. We used findings from these product demos to validate details of each vendor's product capabilities.

› **Customer reference online survey.** To validate product and vendor qualifications, Forrester also fielded an online survey with at least two of each vendor's current customers.

The Forrester Wave Methodology

We conduct primary research to develop a list of vendors that meet our criteria for evaluation in this market. From that initial pool of vendors, we narrow our final list. We choose these vendors based on 1) product fit, 2) customer success, and 3) Forrester client demand. We eliminate vendors that have limited customer references and products that don't fit the scope of our evaluation.

After examining past research, user need assessments, and vendor and expert interviews, we develop the initial evaluation criteria. To evaluate the vendors and their products against our set of criteria, we gather details of product qualifications through a combination of lab evaluations, questionnaires, demos, and/or discussions with client references. We send evaluations to the vendors for their review, and we adjust the evaluations to provide the most accurate view of vendor offerings and strategies.

We set default weightings to reflect our analysis of the needs of large user companies — and/or other scenarios as outlined in the Forrester Wave evaluation — and then score the vendors based on a clearly defined scale. We intend these default weightings to serve only as a starting point and encourage readers to adapt the weightings to fit their individual needs through the Excel-based tool. The final scores generate the graphical depiction of the market based on current offering, strategy, and market presence. Forrester intends to update vendor evaluations regularly as product capabilities and vendor strategies evolve. For more information on the methodology that every Forrester Wave follows, go to http://www.forrester.com/marketing/policies/forrester-wave-methodology.html.

Survey Methodology

Forrester Data Global Business Technographics® Infrastructure Survey, 2016 was fielded in June and July 2016. This online survey included 3,503 respondents in Australia/New Zealand, Brazil, Canada, China, France, Germany, India, the UK, and the US from companies with two or more employees.

Forrester Data Global Business Technographics Data And Analytics Survey, 2016 was fielded in March 2016. This online survey included 3,343 respondents in Australia, Brazil, Canada, China, France, Germany, India, New Zealand, the UK, and the US from companies with 100 or more employees.

Please note that the brand questions included in these surveys should not be used to measure market share. The purpose of Forrester's Business Technographics brand questions is to show usage of a brand by a specific target audience at one point in time.

FOR ENTERPRISE ARCHITECTURE PROFESSIONALS

The Forrester Wave™: Database-As-A-Service, Q2 2017
Automation, Lower Cost, And Flexibility Are Driving Increasing Adoption

April 24, 2017

Integrity Policy

We conduct all our research, including Forrester Wave evaluations, in accordance with our Integrity Policy. For more information, go to http://www.forrester.com/marketing/policies/integrity-policy.html.

Endnotes

[1] SLAs: service-level agreements.

[2] Source: "Amazon RDS Service Level Agreement," Amazon Web Services, May 25, 2016 (https://aws.amazon.com/rds/sla).

[3] SaaS: software-as-a-service; PaaS: platform-as-a-service; IaaS: infrastructure-as-a-service.

We work with business and technology leaders to develop customer-obsessed strategies that drive growth.

PRODUCTS AND SERVICES

› Core research and tools
› Data and analytics
› Peer collaboration
› Analyst engagement
› Consulting
› Events

Forrester's research and insights are tailored to your role and critical business initiatives.

ROLES WE SERVE

Marketing & Strategy Professionals	**Technology Management Professionals**	**Technology Industry Professionals**
CMO	CIO	Analyst Relations
B2B Marketing	Application Development & Delivery	
B2C Marketing	› Enterprise Architecture	
Customer Experience	Infrastructure & Operations	
Customer Insights	Security & Risk	
eBusiness & Channel Strategy	Sourcing & Vendor Management	

CLIENT SUPPORT

For information on hard-copy or electronic reprints, please contact Client Support at +1 866-367-7378, +1 617-613-5730, or clientsupport@forrester.com. We offer quantity discounts and special pricing for academic and nonprofit institutions.