FORRESTER

Maximize Database Agility And Usability With A Simplified Managed Database Access Solution

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Database Expansion And DBaaS Utilization Require An Optimized Access Tool

Modern application development teams are required to use multiple cloud databases to access various features and capabilities. As database usage continues to increase, difficulty using and managing this multitude of databases increases as well. Red Hat commissioned Forrester Consulting to explore this topic.

We found that simplified managed database access solutions, which provide unified database access management, enterprisewide visibility, and self-services experimentation, help decision-makers maximize the impact and mitigate the complexity of their database-as-a-service (DBaaS) soultions and manage their diverse landscape of databases.

Key Findings

Database and DBaaS use are growing. As database implementation expands, leaders increasingly turn to DBaaS to manage their databases.

Organizations seek security, flexibility, and usability. DBaaS investments support organizations' efforts to overcome the challenges of implementing and managing databases.

Simplified managed database access solutions provide support. Access management solutions realize organizational goals through usability and flexibility gains.

Overview

Situation

Approach

Opportunity

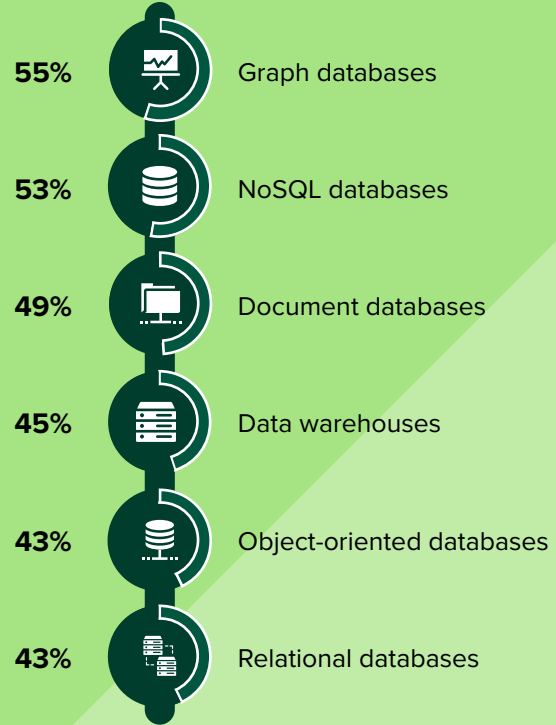Conclusion

Database And DBaaS Use Are Growing In Tandem

As database implementation continues to expand to meet varying organizational needs, decision-makers are turning to DBaaS to manage these databases. Most survey respondents report their databases are at least partially managed via DBaaS, and many respondents are actively expanding that management strategy.

Investments support this shift, as 66% of respondents plan to increase their investment in vendor-hosted DBaaS over the next two years.

DBaaS offerings bring their own realm of complexity and considerations to IT operations.

"For the types of databases your organization is currently using, which of the following best describes how they are managed?"

● Expanding implementation of DBaaS

55% Graph databases

53% NoSQL databases

49% Document databases

45% Data warehouses

43% Object-oriented databases

43% Relational databases

Base: 188 to 210 IT decision-makers at enterprises in the US
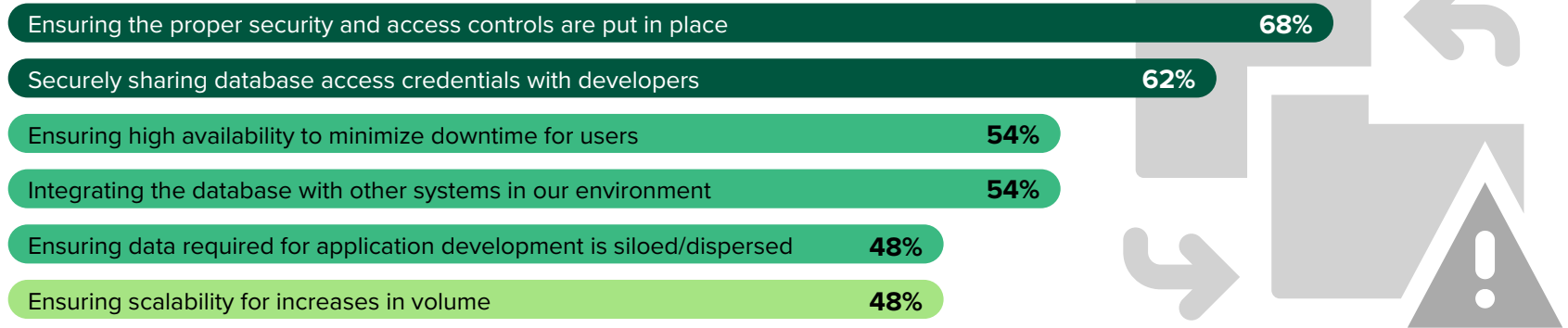Source: A commissioned study conducted by Forrester Consulting on behalf of Red Hat, May 2022

Database Use Brings Security, Flexibility, And Usability Challenges

Multidatabase and multi-DBaaS environments exacerbate organizational complexity and create a host of challenges that leaders need to address. One in three decision-makers strongly agree it's become increasingly complex to manage their organizations' databases, and one in four report it's challenging to determine if redundancies in their organizations' databases exist.

Top challenges surround security, including putting proper access controls in place to protect data and ensuring access is appropriately allocated. In addition to security, other obstacles such as flexibility and usability are present as organizations remain sensitive to their ability to provide seamless customer experiences and create opportunities for scalability and growth.

Challenges Implementing And Managing Organizational Databases

● Security ● Usability ● Flexibility

Ensuring the proper security and access controls are put in place	68%
Securely sharing database access credentials with developers	62%
Ensuring high availability to minimize downtime for users	54%
Integrating the database with other systems in our environment	54%
Ensuring data required for application development is siloed/dispersed	48%
Ensuring scalability for increases in volume	48%

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DBaaS Mitigates Several Challenges, But Creates Complexity

The complexity of managing a multidatabase and multi-DBaaS environment leads to organizational inefficiency, including excessive time/effort monitoring developers' access to different vendor-hosted DBaaS offerings (54%), the inability to access data insights in a timely manner (51%), and loss of employee efficiency (47%).

Thankfully, expanding vendor-hosted DBaaS use can help mitigate security, flexibility, and usability challenges, along with the accompanying consequences. When evaluating the services and capabilities of DBaaS partners, decision-makers are prioritizing vendors that can provide comprehensive security features, flexible deployment, and self-service usability tools — but costly complexity persists.
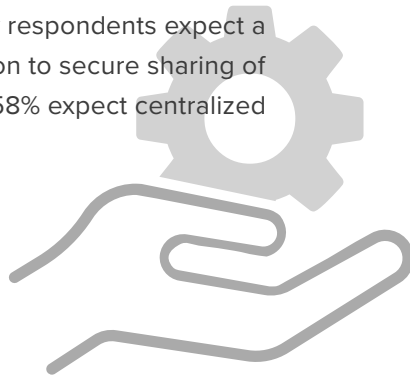
"When thinking of expanding vendor-hosted DBaaS use, how important are each of the following criteria?"

78%
Comprehensive data security features and functionality

74%
Ability to deploy across multi/hybrid cloud

70%
Self-service experimentation of databases

69%
Performance and capabilities for high-transactional workloads

64%
Ability to easily scale based on business needs

64%
Performance and capabilities for data analytics and AI/ machine-learning (ML) workloads

Base: 227 IT decision-makers at enterprises in the US
Source: A commissioned study conducted by Forrester Consulting on behalf of Red Hat, May 2022

Multidatabase And DBaaS Use Require An Access Management Solution

Simplified database access management solutions provide: 1) unified database access management across multiple DBaaS providers, 2) enterprisewide visibility into developer DBaaS access across different applications, and 3) self-service experimentation of different DBaaS solutions. These solutions enable organizations to overcome challenges, realize goals, and drive customer experiences.

Technology partners close gaps in security and administration that emerge as a result of managing multiple databases and DBaaS solutions. Seventy percent of survey respondents expect a simplified managed database access solution to secure sharing of database information and credentials, and 58% expect centralized administrator control.

"Which of the following technical benefits would you expect from working with a simplified managed database access solution?"

Secure sharing of database connection information and credentials

70%

Centralized administrator control of database access by users and/or groups

58%

Improved ability for developers to match database capabilities to application development requirements

52%

Unified view of developer access and usage across multiple DBaaS vendors and instances

50%

Elimination of the requirement for hard-coding credentials into applications

46%

Straightforward developer access and ability to provision databases

40%

Granular administrator control of database access by users and/or groups

33%

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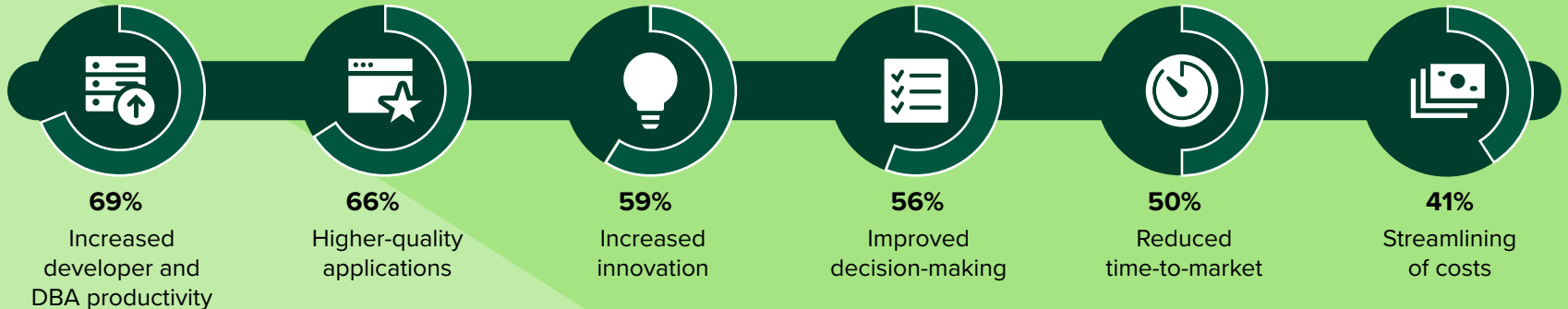
Productivity Gains Sharpen Business Performance

As simplified managed database access solutions provide the necessary standardization management to overcome inefficiencies and accelerate productivity and innovation, business benefits can also be gained.

Decision-makers expect to deliver a richer and more robust customer experience by working with a simplified database access solution that provides self-service experimentation with different DBaaS products and streamlined development processes. Specifically, respondents expect increased productivity, allowing for the creation of higher-quality applications, increased innovation, improved decision-making, and efficiency gains.

"Which of the following business benefits would you expect from working with a simplified managed database access solution?"

69%
Increased developer and DBA productivity

66%
Higher-quality applications

59%
Increased innovation

56%
Improved decision-making

50%
Reduced time-to-market

41%
Streamlining of costs

FORRESTER OPPORTUNITY SNAPSHOT: A CUSTOM STUDY COMMISSIONED BY RED HAT | AUGUST 2022

Base: 227 IT decision-makers at enterprises in the US
Source: A commissioned study conducted by Forrester Consulting on behalf of Red Hat, May 2022

Conclusion

Organizations need to reduce complexity and mitigate security, flexibility, and usability challenges as multi-DBaaS usage increases. Simplified managed database access solutions provide an opportunity for alleviation by enabling:

- Frictionless self-service experimentation with new or existing DBaaS.

- Unified database access management across multiple DBaaS providers.

- Enterprisewide visibility into developer DBaaS access across different applications.

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Methodology

This Opportunity Snapshot was commissioned by Red Hat. To create this profile, Forrester Consulting supplemented this research with custom survey questions asked of 227 IT decision-makers responsible for their organizations' cloud management strategy. The custom survey began and was completed in May 2022.

ABOUT FORRESTER CONSULTING

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Demographics

REGION	
US	**100%**

TOP 5 INDUSTRIES	
Consumer product goods/manufacturing	**10%**
Manufacturing	**8%**
Financial services	**8%**
Healthcare	**7%**
Retail	**6%**

COMPANY SIZE	
$300M to $399M	**7%**
$400M to $499M	**9%**
$500M to $999M	**19%**
$1B to $5B	**47%**
>$5B	**18%**

ROLE/POSITION	
C-level executive	**7%**
Vice president	**17%**
Director	**24%**
Manager	**30%**
Full-time practitioner	**22%**