



POINT OF VIEW:

Database Administrators Are Here to Stay

Six ways DBAs can fill an increasingly critical role in the business

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A database transformation is underway that some say threatens the long-term future of database administrators (DBAs). More and more enterprises are shifting from on-premises databases to multicloud and hybrid cloud solutions using database as a service (DBaaS), autonomous database cloud services or managed service provider models. In each case, cloud providers are automating their products with self-patching, self-healing and other features that are designed to reduce costs and improve efficiency. This has some people worried that the move to the cloud could put DBAs out of work.

Historically, DBAs focused primarily on mundane, repetitive tasks such as monitoring, patching, tuning and provisioning. As many of those functions are automated by cloud providers, many DBAs may think they are losing their “bread and butter.” But this transformation does not mean that the role of the DBA will disappear — only that it will change. Data is — and will remain — the lifeblood of business, and DBAs can play a central role as data professionals who provide valuable insight into how organizations can best harness their data to produce business value.

The U.S. Bureau of Labor Statistics projects 11% employment growth for DBAs by 2026 based on the increasing data needs of organizations in all sectors of the economy. To prepare for those new roles, here are six critical steps DBAs can take now to make sure they are part of that growing future, evolving along with their organizations as they journey to the cloud.

Six ways to adapt for the cloud-based future

DBA roles are changing — and that can be disruptive for some. Many organizations have already moved their databases to the cloud, and those that have not will almost certainly do so soon. Some DBAs will lose their jobs during this transformation, but others can take steps, including the six outlined here, to avoid that fate. In fact, in many cases, these steps can help DBAs become an even more critical part of their organizations’ future.

1. Know the cloud

The future of databases is in the cloud, and to be successful over the long term, DBAs must not only embrace that reality but also become cloud experts. In the years ahead, there will be a high demand for DBAs who understand the cloud landscape in general and how to strategically manage databases in the cloud. Specific expertise in areas such as data security, database architecture and planning will be increasingly valued.

To become cloud experts, DBAs will want to take advantage of free trials and earn cloud certifications from multiple providers. It will be important to understand not only the general benefits and drawbacks of the many different cloud offerings but also the security and data integration services and options available with each. In exploring the cloud landscape, DBAs will learn that for every routine task

that will vanish from their existing roles, a variety of new, higher-order tasks will be added that can provide job security.

Here are the three cloud models DBAs need to understand, each of which will require different DBA skills and training:

- **DBaaS:** In this model, the database still needs to be upgraded, patched, monitored and administered by a DBA, although the role is a little different than with on-premises solutions. Many of the traditional DBA tasks are simplified, so DBAs need to be familiar with using a variety of different tools.
- **Autonomous database cloud services:** Even with this fully managed cloud service, where operational DBAs are unnecessary, there is still a need for DBAs to control and execute one-off backups, initiate recovery as required, perform certain administrative tasks, and manage everything from application performance and tuning to user administration, access control and database connectivity.
- **Managed services:** This model provides a fully managed database service using a DBA team that monitors, patches, upgrades and administers databases. Organizations that hire a managed service provider can shift their internal DBAs away from routine tasks and toward more business-forward initiatives.

2. Embrace automation

Automation is nothing for DBAs to be afraid of. In fact, automation provides the foundation for eliminating mundane tasks that currently prevent many DBAs from working on higher-value initiatives that can improve the business. Automation also prevents human errors.

The first step toward embracing automation is to learn about the different tools used by cloud providers for

provisioning, monitoring, backups and other routine tasks. DBAs may not need to perform these tasks anymore, but it is still important to know about them, how they work and when they need to be initiated. That level of strategic decision-making will not be eliminated anytime soon.

Instead of fearing automation, DBAs will want to look for new ways to take advantage of it, such as providing tools to developers and end users so that they can self-serve routine or trivial tasks. That can save the organization money and free the DBA to take on more business-forward initiatives.

It is also important to note that although most operational tasks will be automated, others will not be. Business-specific tasks such as application design and tuning are examples of areas where DBAs can continue to provide value. More generally, DBAs can focus on understanding the business as a whole and its data and data relationships, which will lead to insights that automation can never replace.

3. Prioritize data, not technology

Data has been, and will always be, the single most important asset for any organization. That is becoming even more true now as increasing amounts of data flood into organizations from more sources — a trend that will only accelerate in the years ahead.

That's why it is so important for DBAs to be seen as data experts and not simply technical experts. As databases are moved to the cloud, in-house technical expertise will not be valued as highly, and many low-level, tech-only workers will lose their jobs.

At the same time, DBAs who thoroughly understand the organization's data — including what data the organization has, how to integrate it, how to protect it, who should have access to which data at which level and how to optimize data storage — will be extremely valuable to the business, especially if they are also

capable of communicating that data-oriented knowledge to the C-suite.

4. Develop soft skills

In the traditional work model, DBAs interact primarily with network engineers, storage administrators, system administrators and other IT workers. The focus is on the technical execution of both routine tasks and more complex endeavors such as database recovery and failover testing.

As organizations move to the cloud, knowledge and understanding of those technical tasks will remain valuable, but DBAs will also want to develop soft skills, including the ability to communicate effectively with a wider audience of not only technical but also business teams. Specifically, DBAs who can communicate complex technical information in lay terms will serve a vital role as a bridge between the business and in-house technical teams and, increasingly, between the business and cloud providers.

DBAs will also benefit from developing other soft skills such as problem-solving and teamwork, which will help them be more effective in their positions and more attractive to future employers.

5. Understanding changing data security needs

Database security concerns certainly don't go away when databases are moved to the cloud, and DBAs can bolster their job security by understanding data security, integration and data access across multicloud and hybrid cloud environments.

DBAs will be counted on to determine who should have access to which data, and when and how the data should be made available in the cloud. Especially with data storage demands continuing to rise, DBAs can also help the organization lower costs by understanding which data should be archived or purged when, and by what means.

Another way for DBAs to expand their security-related roles is by learning to train developers and end users on how to work securely with databases in the cloud. No matter how stringent the organization's security protections may be, end-user error poses an enormous threat — making effective training organized or run by DBAs a particularly valuable service.

6. Focus on cost-effective provisioning

Whether organizations opt for multicloud, hybrid cloud or single-cloud models, cost control remains a major concern and is another area in which DBAs can help the business save money. First, DBAs need to understand, in detail, the different cost structures of public cloud, hosted private cloud and on-premises databases.

Then, when the DBA understands the costs involved with each, including egress and ingress, they can identify cost-effective provisioning solutions — for example, knowing which tools should be used to bring each database up and when, and how to shut it down at scheduled times or as needed to reduce costs.

One of the advantages of having a database in the cloud is that the DBA is able to scale it up or down as needed. For instance, the DBA could set up a test database to investigate a problem and then shut it down when it is no longer needed. The same is true for various database services — DBAs who understand costs and can balance them effectively with business needs will be able to provision efficiently and add value to the business.

DBA roles are not disappearing - they're becoming more important

There's no two ways about it — more and more organizations are moving their databases to the cloud, and DBAs who currently manage on-premises databases must evolve to survive. In fact, the best thing DBAs can do right now is to embrace the cloud journey and view it as an opportunity to do their job better and faster while adding more value to the organization.

The DBAs who will remain relevant will be experts on the cloud, automation, data management, data security and cloud provisioning. They will be viewed as data experts who devote less time to patches, upgrades and tuning — which will largely be done in the cloud — and more time to complex tasks such as database design, data analytics, application tuning and data security.

These DBAs will also be effective communicators who serve as a bridge between the organization's technical and business teams. And, perhaps most importantly, they will earn multiple cloud certifications and attend user group conferences to stay at the forefront of their field — regardless of how rapidly it continues to change and evolve.





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