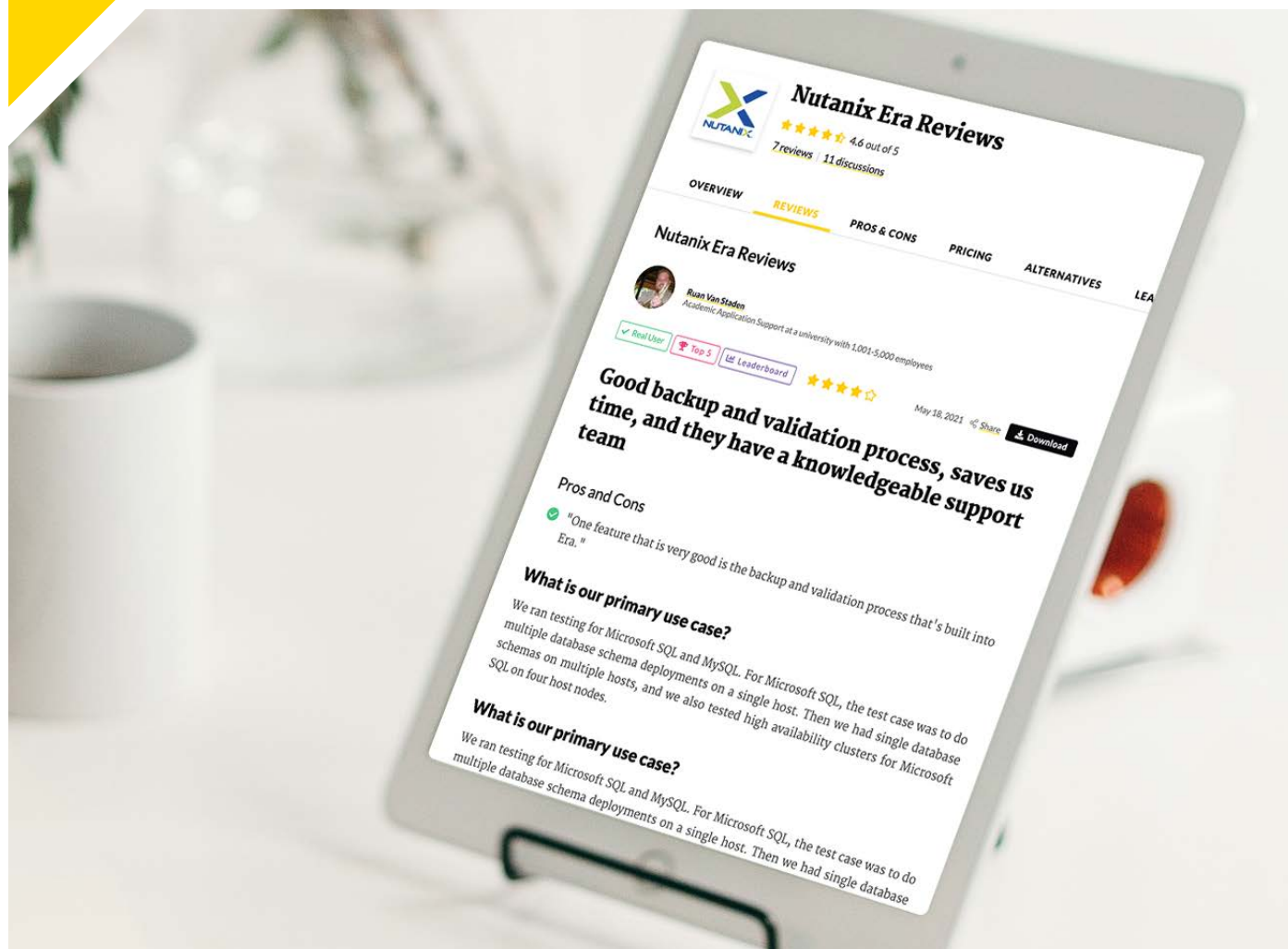


# PeerPaper™ Report 2022

Based on real user reviews of Nutanix Era

## Improving Database Operations with Nutanix Era



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# Introduction

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Database management can be a heavy lift in many organizations. For one thing, there are often quite a few databases to manage. According to the research firm IDC, for example, over three-fourths of organizations surveyed maintain over 200 database instances. Eighty-two percent have more than 10 copies of each instance. As a result, database administrators (DBAs) at most companies deal with over 2,000 database instances.

Managing the database lifecycle across such a large estate is time-consuming and potentially stressful. Database development and management tools like Nutanix Era offer a solution. Moreover, they play an important role in helping DBAs get better at database operations. Based on real user reviews of Era, on PeerSpot, this paper explores how Era helps improve operations processes while minimizing inefficiencies.

# Database Management Tool Use Cases

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PeerSpot members are putting Era to work across various use cases. For example, a university with over 1,000 employees ran testing for Microsoft SQL and MySQL. Their Academic Application Support Technician said the Microsoft SQL use case involved multiple database schema deployments on a single host. As he put it, “We had single database schemas on multiple hosts, and we also tested high availability clusters for Microsoft SQL on four host nodes.”

For a System Engineer at a tech services company with more than 200 employees, Era makes it easy to execute switching different phases of development. He said the product provides “an easy way to switch to one type of development and to use testing and prediction on cloning VM.” An insurance company with over 1,000 employees uses Era to improve turnaround time from server deployments, patching and database restoration. According to their Senior SQL Server DBA, his team can now restore a 2TB database in about 45 minutes or less. “It used to take days to do a restore for our warehouse refresh,” he commented. “Now, it is literally taking under an hour.”

**“It used to take days to do a restore for our warehouse refresh. Now, it is literally taking under an hour.”**

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In another use case, an aerospace and defense firm with more than 500 employees used Era to migrate its Oracle databases to comply with licensing requirements. A Database Architect at the firm said the all-in-one solution, including storage, computing and more, led the company to use Nutanix hardware. He remarked, “You only have to license the CPUs within that hardware cluster. Since we were going to have to provision all these new servers and databases, it seemed like a great time to automate that.” He noted that the automation of server and database provisioning and the one-click patching solution were valuable features.

Semlex, a security firm with over 50 employees, uses the solution with Microsoft SQL and PostgreSQL servers. An IT Manager with Semlex said, “We are using the Nutanix Era solution for managing our Microsoft SQL Server, which hosts a database that is approximately five terabytes in size.”

A Principal Technology Specialist at a comms service provider with more than 1,000 employees uses Nutanix to provide managed services for one of the world’s largest telecom providers. “We provide managed services to the customer, including the platform and service as well as VM as a service,” he said.



**70%**  
**performance**  
**enhancement**

# How Era Improves Database Operations

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As a database development and management tool, Era helps DBAs throughout the database lifecycle. It enables smoother development and testing (Dev/Test), while also easing deployment and the process of management itself. In addition, Era helps with database visibility, as well as backup and restore. Ultimately, it enables DBAs to save time and reduce the overall data footprint.

## Ease-of-Use and Deployment

Era helps organizations improve database operations by simplifying administrative tasks such as database configuration, deployment and provisioning. For example, the aerospace and defense firm previously mentioned also uses Era to cut deployment times. “It used to take 10 days if we had to get a new server, and I can now do it in two hours, and that includes provisioning the database,” explained their Database Architect.

The tech services System Engineer noted that Era is easy to use and makes it simple to handle operations such as Virtual Machine (VM) cloning, testing, and prediction. Similarly, the university Application Support Technician said Era simplified database deployment across multiple database engines. In tests with MySQL and Microsoft SQL, the task of cloning databases was faster and simpler. “Previously, it would take us two to two and a half hours to do a clone or a snapshot,” he said. “Now, it’s five or six minutes.” Figure 1 depicts this contrast.



**Reduced  
deployment  
from 10 days  
to 2 hours**

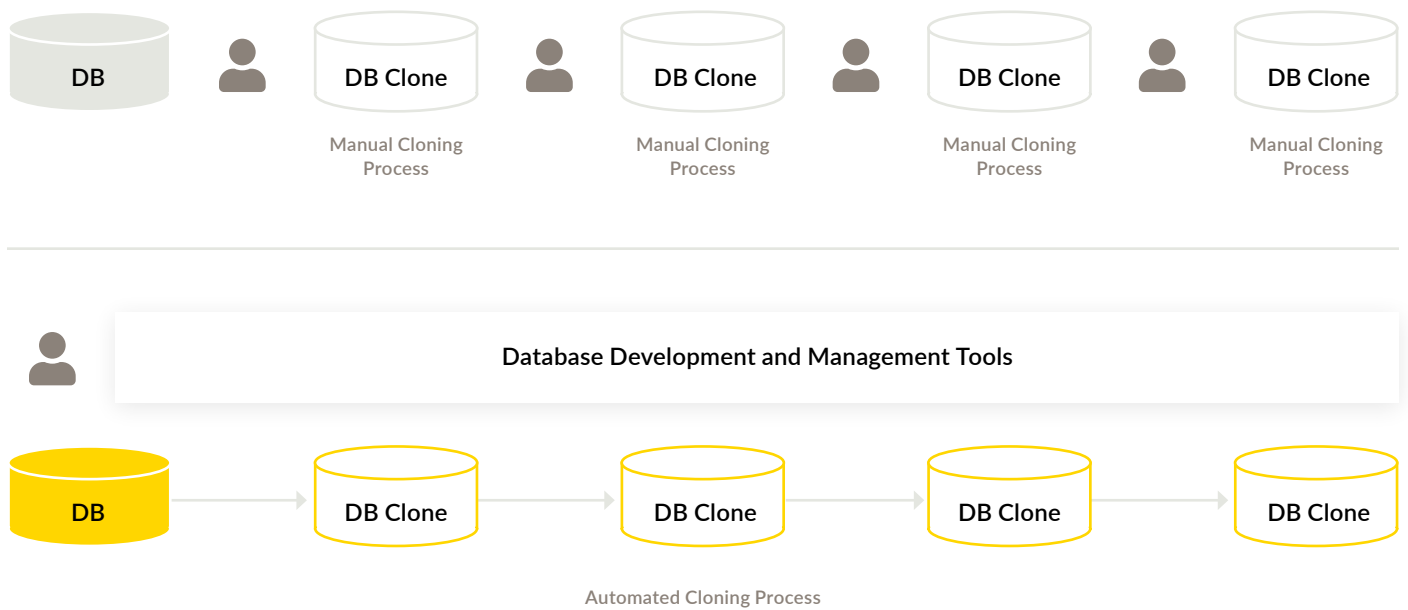


Figure 1 – Automating database cloning saves DBA time.

This user further noted that the deployment process is easier due to Era's ability to script deployments. Numerous requests for the same deployment types – for example, basic database schemas – can each be run using a deploy script that automatically sets up the deployment and grants the users access to their database in about five minutes. "In the past, we had to go through a whole setup and deployment process, which for us, took about half a day," he said. "That's a lot of time that we save."

Semlex can manage databases through a unified point of control, avoiding multiple interfaces to manage different database engines, according to their IT Manager. "From a single place, we are able to see what's happened in our environment," he said. Similarly, Era improved the process at the insurance company by creating a centralized access point. "From an always-on availability perspective, it has simplified the process quite extensively," said the insurance company Senior SQL Server DBA.

**"Previously, it would take us two to two and a half hours to do a clone or a snapshot. Now it's five, six minutes."**

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**“From an always-on availability perspective, it has simplified the process quite extensively...”**

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**“The use of the log makes it easy for the team to conduct the troubleshooting process, and this has a positive impact on our business because we can solve problems quickly.”**

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Era improved the Semlex IT Manager’s ability to troubleshoot problems in their databases. For example, operational issues could be identified quickly through an easy to manage process. “When we find out which operation has the problem, we can resolve it using the information available in the log files,” he said. “The use of the log makes it easy for the team to conduct the troubleshooting process, and this has a positive impact on our business because we can solve problems quickly.”

The solution offers deployment and administration of workloads from different databases, which is important in situations in which a team cannot rely only on a single database engine. Semlex’s IT Manager highlighted Era’s performance in managing workloads for PostgreSQL and Microsoft SQL servers. In addition, his company’s production process involves replication of the 5TB SQL database. “One of the ways that Nutanix Era has helped is that, with a single click, we can clone the database in less than 30 minutes,” he explained.

## **Backup and Restore**

The university Application Support Technician tested Era for back-up and in-place restoring of databases. He found the tool’s ability to perform restores with the Microsoft backup system stable and easy to use. In his experience, while load issues on database systems would typically cause backup failures, with Nutanix Era, the backup system sits separately from the performance of the database. As he saw it, this means his backup will still go through, even if the database is straining under a load.

**“It’s quick and it doesn’t take up nearly as much storage space as traditional backups.”**

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**Allows  
for quick  
problem  
solving**

The backup and validation process saves time and ensures that backups will be set up correctly and can be restored. Because other backup systems are not database-aware, the validation process involves restoring a backup to see if it worked. “With Era, it actually validates on the fly, so you know you’ll be able to restore,” he added.

His team made differential backups continuously without affecting the database engine performance. He shared, “We were also able to schedule the backups at different times to make full backups and we couldn’t see any impact or load on the database performance while we were doing this.”

The aerospace Database Architect said his team uses Era when the enterprise-level backup product that the team is required to use goes down. “For us, it’s a great fallback, but for other companies, it could be an awesome first-line backup,” he said. “It’s quick and it doesn’t take up nearly as much storage space as traditional backups.”

Semlex’s IT Manager said Time Machine is the tool’s most valuable feature. With Time Machine, his team can restore the database quickly in the event of a problem – without taking regular snapshots. It now takes about an hour to complete a restore, which has reduced the company’s overall downtime. In addition, his team can create multiple backups throughout the day without affecting production workloads. This flexibility is essential since the team receives and manages sensitive data, including personal identifiable information (PII). The creation of multiple daily backups limits the potential for data loss. “When we have a problem, we can easily restore the previous backup,” he said. “The recovery time objective is very short.”

## Dev/Test

When his university used Era to run development processes, the Application Support Technician flagged the ability to generate development, testing and production databases “on the fly without us influencing production” as a significant advantage. “This is one of the big time-saves because, in the past, you would normally have to take a backup of production, sanitize the data, then put it on a test machine,” he said. “This is something Nutanix Era makes very simple to do.”

He went on to say, “This solution has helped us save on Tier 1 storage, which is important to us because we do a lot of systems in-house. Storage clusters are heavily used, and they have a large footprint. Being able to save storage space for non-production tasks is significant because, for testing, we have a group of five testers working there. On dev, we have two or three developers that would work there constantly.”

Saving on storage means his organization can grow its production environments more effectively because it doesn’t have to pay for test and dev storage separately. In addition, the cost of ownership is lower because they do not have to purchase more storage as the system starts crowding.

He added, “If you think about it, if we run dev, test, and production all with production data, because that’s what they need to do the development and testing on, we need three times the data every time we deploy it. If the system then grows to two terabytes, that’s six terabytes that we have to pay for. With Nutanix, we basically save four terabytes, which is a lot of money.”

**“This solution has helped us save on Tier 1 storage, which is important to us because we do a lot of systems in-house.”**

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**Decreases  
patching  
from 40 hours  
per month  
to automatic  
schedules**

## Visibility

The insurance company Senior SQL Server DBA said the product increases his team's visibility into "the actual processes which are running, what is being consumed, and long-running queries." Within Era, it is a simple view. The product monitors long-running queries and provides his team with good visibility into where problem areas lie in large databases. "This gave us a good direction to fix indexes and look at performance bottlenecks," he said.

## Patching

Patching is the most valuable feature, according to the insurance company Senior SQL Server DBA. "We spent a lot of time and effort patching our SQL instances after hours," he said. "With Nutanix Era, you can schedule and automate them during your normal operational hours (during the day). We don't have to sit there and babysit the whole time." He then explained, "You schedule all the patching, then everything happens automatically with minor tickets from the engineer. So, our patching, which took four hours, went down to an hour for the engineer."

This user said time spent patching decreased from about 40 hours per month to automatic schedules. The company further reduced server deployment turnaround time from an always-on availability group perspective from about four days to one hour. Era has helped his team optimize their database performance. He said, "When we moved to the full Nutanix stack, we saw about 70% performance enhancements, going from the old physical to the Nutanix stack."



**Increases  
visibility  
into  
processes**

**"With Nutanix Era, you can schedule and automate them during your normal operational hours (during the day). We don't have to sit there and babysit the whole time."**

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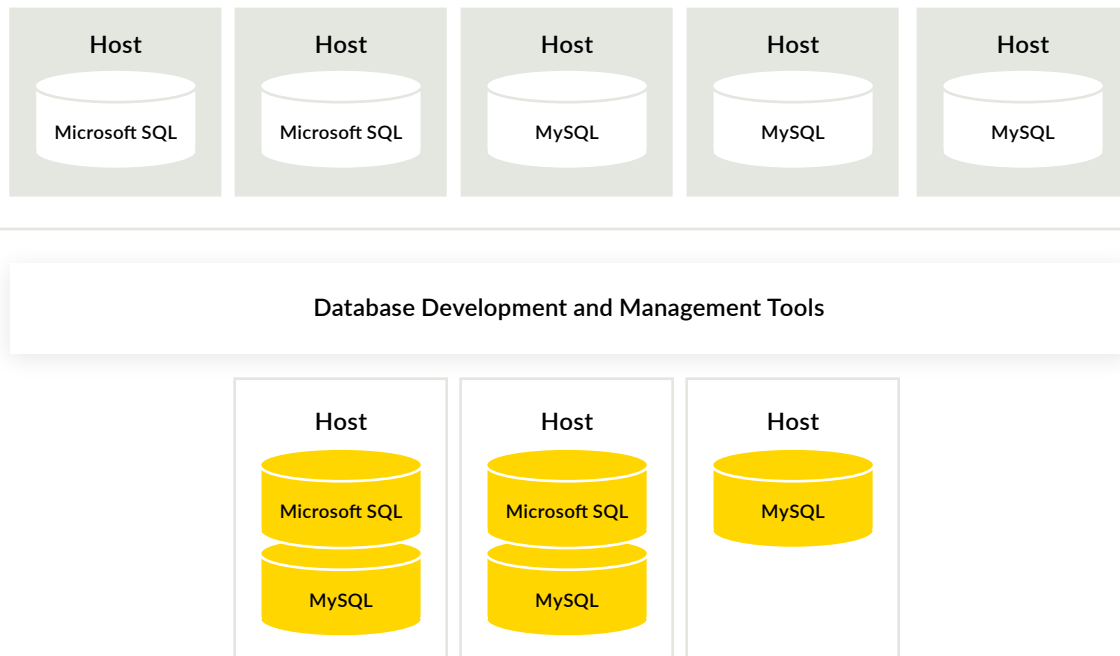


Figure 2 – Database development and management tools cut down on the database footprint, in this case by allowing different databases on the same host.

**“When we moved to the full Nutanix stack, we saw about 70% performance enhancements, going from the old physical to the Nutanix stack.”**

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## Footprint and Scalability

Semlex’s IT Manager uses Era to create different clones and work separately. “We save a lot of data in our production database and using Nutanix has improved the performance.” In addition, It is easy to copy and synchronize logs from clones using Era. “The impact of the boost in performance has been good and everybody is happy with it.”

The university Application Support Technician said Era facilitated performance and flexibility for many workloads He explained, “Since we’re running the hosts on the normal Nutanix infrastructure, we were able to scale the loads according to what we need, and it’s easy to scale up or down as needed,” he said.

The product helped the university reduce its database footprint because it offers the ability to deploy Microsoft SQL instances and MySQL instances on the same host without reconfiguring. “This means that we can consolidate our database service.” When he provisions a database, it is for a

**“The impact of the boost in performance has been good and everybody is happy with it.”**

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**“Overall, we have spent less time on database management, and it has helped to reduce off-hours work.”**

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**Restores databases in less than 1 hour**

specific server. His team assigns the memory, CPU and storage for that specific machine. For about 50% of the lifetime of that database, those resources are never actually utilized, whereas with Era, they can provision those as instances on the same host and scale the host to cater to all of those. Figure 2 shows how this cuts the database footprint.

He said the host can be scaled as needed, which allows the team to move into a more economical database model that uses “multiple database instances on a single host, which reduces our footprint quite a lot.” The insurance company Senior SQL Server DBA similarly found that Era has saved space quite drastically at the insurance company where he works. He said, “We have saved about 4TB just on one database, looking at the DR copies.”

## **Saving Time**

Semlex’s IT Manager said that using Era has decreased the time it takes to clone or take a snapshot of a database at Semlex. “We can clone a large database in between 10 and 15 minutes, whereas a snapshot can be created in less than five minutes.”

Nutanix has helped to reduce the time required to manage database workloads. This user then related, “Overall, we have spent less time on database management, and it has helped to reduce off-hours work. Because everything is working fine, we do not need to work on the database during our off-hours.” With less time spent concentrating on database management, more time is available to spend on other IT services. He added, “We can work on other things, which leads to better overall performance for the IT department.”

# Conclusion

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Managing hundreds or thousands of database instances is a taxing workload for DBAs. This does not have to be the case, however. As Era users explain in their PeerSpot reviews, it provides a welcome solution. Era simplifies database operations. Across the database lifecycle, DBAs can now save time on tasks like patching while reducing their database footprint. Databases become easier to scale. Backup and restore grow more efficient. Database visibility improves. Dev/Test evolves into less complicated processes to manage. Through these capabilities, database development and management tools allow DBAs to play a more fluid and proactive role in IT as a whole.

# About PeerSpot

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**User reviews, candid discussions, and more for enterprise technology professionals.**

The Internet has completely changed the way we make buying decisions. We now use ratings and review sites to see what other real users think before we buy electronics, book a hotel, visit a doctor or choose a restaurant. But in the world of enterprise technology, most of the information online and in your inbox comes from vendors. What you really want is objective information from other users. PeerSpot provides technology professionals with a community platform to share information about enterprise solutions.

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# About Nutanix

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Nutanix is a global leader in cloud software and a pioneer in hyperconverged infrastructure solutions, making clouds invisible, freeing customers to focus on their business outcomes. Organizations around the world use Nutanix software to leverage a single platform to manage any app at any location for their hybrid multicloud environments.

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