

The Business Case for Windocks

Windocks combines Docker SQL Server containers and database cloning for secure data access and delivery. SQL data can be sourced from any enterprise storage system, or from SQL Server backups, with data delivery to all SQL Server application environments including Microsoft SQL containers and conventional SQL Server instances. The business case for Windocks varies depending on business goals and uses, but includes the following proven benefits:

2-4x improved software release success: application testing against the production data is improved with Windocks, with TB class data environments delivered in seconds. Test coverage improves and customers realize improved software release success. Windocks customers report an average 250% reduction in software release failures.

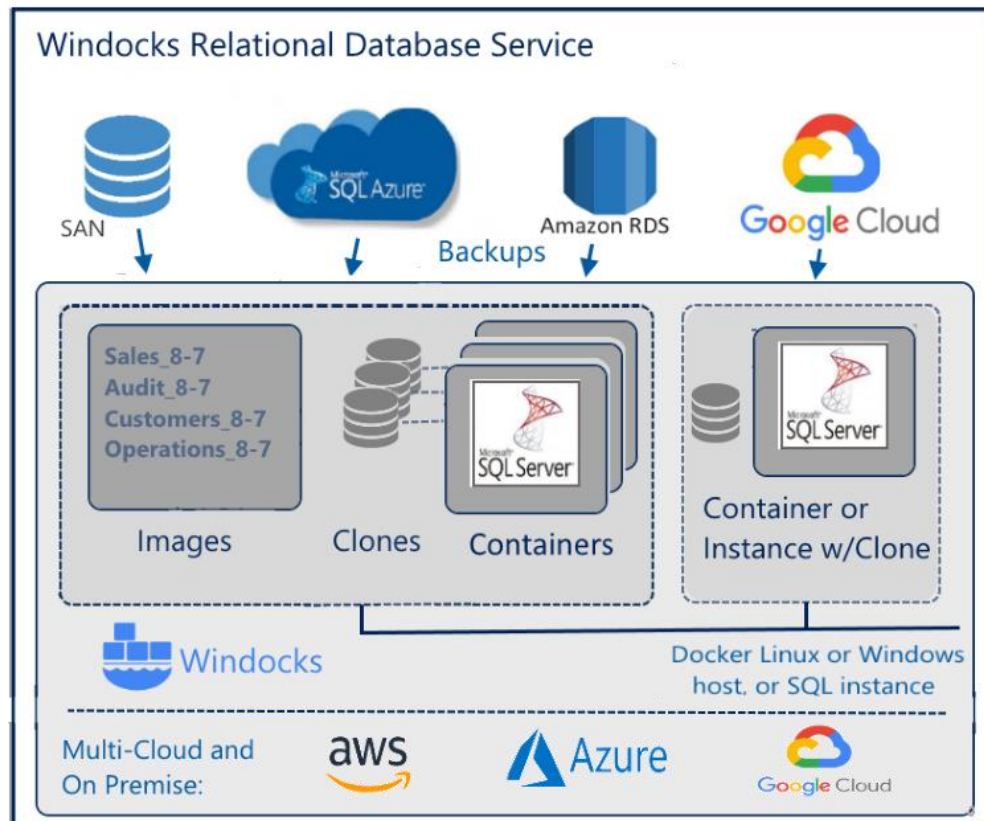
5:1 reduction in VMs used for Dev/Test: Windocks delivers isolated containers on a single VM, enabling an average 5:1 reduction in the number of VMs. Storage consumption is also reduced by up to 99% through the use of database cloning. The end result is reduced spending on infrastructure, and less labor involved in maintenance of dev/test operations.

License Savings: are realized when using SQL Server containers with SSRS support, as well as for third-party licenses. In addition to savings on SQL Server Enterprise licenses, identify expensive VM based licenses that may yield sizable savings. Thales Vormetric key management system is one example of a VM based license. By adopting containers and reducing the number of licensed VMs and VM core CPUs, substantial license costs savings can be realized.

Data Governance and Compliance: Windocks treats SQL data as a first-class image artifact, and supports the creation of an authoritative, secure enterprise data catalog. Windocks images produce a fully auditable and reportable record of data usage throughout the organization.

Windocks for secure relational data access

Windocks delivers cloned SQL Server database environments for software development, test, and reporting. Database clones are complete environments with read/write support that are delivered in seconds and consume minimal storage. Clones are sourced from Storage Area Network (SANs), or built on Windows Virtual Hard Drives (VHDs) using SQL Server backups. Data environments are delivered to any SQL Server environment, including Microsoft or Windocks SQL containers, or conventional instances. Database clones combined with SQL containers support the ability to automate testing with Jenkins, Team City and other Continuous Integration strategies.



Improved software release success

Windocks primary use is to simplify access and delivery of production data environments for software development and test use. Rather than taking hours or days to provision test environments, or work with shared environments, developers and testers gain the freedom to work with isolated environments that are delivered in seconds. The result of this fast provisioning is expanded test coverage, and Windocks customers have reported an average improvement in release success of over 250%.

VM and storage savings:

Windocks customers run as many as 40 isolated SQL Server containers on a single VM, and achieve a dramatic reduction in the number of VMs used to support development/test. Database clones also contribute to savings with a 99% reduction in storage needed to support the isolated instances. In addition to the savings in pure infrastructure, the reduction in VMs also contributes to significant labor savings previously involved in VM maintenance.



License cost savings:

Windocks support of SQL Server SSRS in containers is popular as a compliment to SQL Azure and AWS RDS, which do not support SSRS. Windocks SSRS containers also deliver effective “shared pool” resources similar to what is promoted with SQL Azure. The result shows that clients can cut SQL Server license costs by as much as 50%. Third party licenses that are offered on a per VM basis, such as Thales Vormetric also present significant license cost savings opportunities.

Data Governance and Compliance:

Current industry practices where relational data resides in storage arrays do little to address enterprise needs for improved data governance. Windocks elevates relational data to be treated as a first-class image artifact, and produces a fully auditable record of images, the security policies applied to each image, and the users/groups who were provided access, and a record of each user who accessed the image.

Estimate your expected savings:

Savings realized through the use of containers varies depending on the size of the team, how many VMs were used previously. The following analysis can be replicated using costs from your organization to quantify the expected savings to be realized with Windocks. The example assumes a team of 10 people, and incorporates averages that reflect Windocks customers.

Assumptions:

A Windows VM with SQL Server Developer edition costs \$200.00/month, Dev and other personnel cost is \$75/hour.

Metrics and Results:

Reduction in 9 Virtual Machines at \$200/month each	\$ 1,800/month
Environments delivered in 1 minute vs 1 hour (note 1)	
10 people x 1 hour/week x \$75/hr x 4.3 weeks/month	\$ 3,200/month
Reduced VM maintenance of 1 hour/week/VM	
9 virtual machines x 0.5 hour/week x \$75/hr x 4.3 weeks/month	\$ 1,450/month
Cutting post-release hot fixes in half (note 2)	\$ 7,500/month

Average financial benefits	\$13,950/month
Cost of container host (Windocks 20 container server)	\$ 499/month

Net Average Bottom-line Benefit	\$13,450/month

Net ROI is >20:1 (\$13,950/\$499) =

28:1

Note:

- 1) Assumes only one environment is delivered and used per week. Productivity gain grows dramatically with more frequent environment updates and use. Most teams find containers have an average life span of 2 days or less.
- 2) Survey participants estimated an average weekly benefit of 25 man hours that were previously spent in post-release bug fixing. Most organizations value this increase in release quality at a higher rate than the “straight” cost of \$75/hour used in the above calculations.

Financial or Strategic Considerations

Windocks customers report dramatic bottom-line benefits as outlined above. The larger question is how to value increased release frequency and improved release quality? Employee recruitment and satisfaction are enhanced, with teams being less stressed with each release. Studies indicate that post-release bug fixes cost 5-10x the same bug discovered and remedied prior to release. In extreme cases companies have been bankrupted by releasing poor quality software.

How strategically valuable is it for your business to gain competitive advantage in software development? Is it a strategic priority, containers and clones are arguably one of the most compelling ways to modernize .NET + SQL Server software development?

Start your Docker and DevOps journey with Windocks

Gartner and leading industry analysts argue that Windows enterprises should be making plans to adopt Docker containers, and ultimately Kubernetes as part of a modern software development strategy. Microsoft’s SQL Server division reinforce these arguments with increasing focus on SQL Server container support on Linux. Windocks customers indicate that adoption of SQL Server containers and database cloning is a simple addition to existing systems and infrastructure, and enables these organizations to move forward toward further automation and DevOps strategies from a strong technology base.

Contact Windocks to connect with organizations who have proven the benefits outlined in this article. You can begin your journey to adopt Docker SQL Server containers with database cloning by downloading the Windocks free Community Edition, available at www.windocks.com/community-docker-windows.