

Intelligent Infrastructure by Tintri has revolutionized virtualization by guaranteeing minimal latency, dramatically reducing administrative overhead, and enabling the most powerful VM-level automation capabilities available on the market today. Tintri SQL Integrated Storage now expands these powerful capabilities to SQL databases. With Tintri SQL Integrated Storage, integrated machine learning and artificial intelligence ensures high-performance, enables a new world of database-level functionality, all while reducing administrative overhead by as much as 95%. SQL Integrated Storage works autonomously so you can focus on your business.

There is a lot of buzz around SQL Integrated Storage, but what exactly is SQL Integrated Storage? It's a fundamentally different way to look at how SQL Server databases reside within your infrastructure. SQL Integrated Storage is built to natively understand the behaviors and needs of databases without the complexity and obfuscation of LUNs or volumes. Infrastructure administrators and database administrators can finally speak the same language, collaborate more effectively, and avoid the pitfalls and finger-pointing associated with standard infrastructures.

Key capabilities include:

## Autonomous Quality of Service

By default, SQL Integrated Storage employs advanced machine learning to understand the performance needs of every database and then automatically tunes itself to ensure that those databases achieve the lowest possible latency in real-time. Optionally, administrators can granularly disable this feature to set specific minimum and maximum guaranteed IOPS per database in 3 easy clicks. Autonomous QoS means no noisy neighbors and dramatically reduced administrative overhead.

## Instant Non-Disruptive Snapshots

Instantly snapshot individual databases with zero stun and no performance impact to your production SQL Servers. You can easily recover a copy of your data in seconds or refresh a reporting database multiple times per day regardless of size. In addition, you can quickly and non-disruptively clone or refresh a copy of a database into one or many of your development and staging environments through our intuitive GUI or via a powerful PowerShell Toolkit.

## Simplified Configurations

Employing the most advanced machine learning capabilities in the market for storage optimization means that the system continually configures itself, so you don't have to. Simplify your SQL Server configurations. Complex and fragile configurations are no longer a hurdle towards adequate performance and data protection. With SQL Integrated Storage, you can meet your SLA's with less complex configurations and without the associated administrative overhead.

## Empowered DBAs

SQL Integrated Storage is simple to use. It empowers database administrators to make their own clones either via the GUI or the most advanced PowerShell toolkit available for database storage operations. No storage expertise is required nor do DBAs need to engage and wait for storage admins to assist with operations or escalations.

## Unparalleled Visibility

Simplify troubleshooting with unparalleled visibility and performance metrics on a per-database and per-file level. You'll have real-time insight into database-specific telemetry, including latency, IOPS, throughput, utilization, space saving factors, and more.

## Rapidly Resolved Performance Issues

You can quickly detect and resolve performance issues. The inherent database-level performance isolation and latency visualization simplifies troubleshooting and highlights root causes so you can keep your databases operating at peak efficiency.

## Advanced Predictive Analytics

With multi-year trending on space utilization, performance, and more, you can predict future capacity and performance growth to ensure that the right amount of resources is available as needed to avert resource contention or limits.

Policy	Database	SQL Server	IOPS	Throughput MBps	Latency ms	VMstore	Physical Used GiB	Replication State
0	AdventureWorksDW2017	PASS-DEV.MSSQLSERVER	456	86.53	8.5	HQTM-DB-T5080.tlucs.tn.tintri.com	88.49	Not configured
0	ERFACT-clone	TSIS-AG-Node1.MSSQLSERVER	128			HQTM-DB-T5080.tlucs.tn.tintri.com	0.04	Not configured
0	Hybrid	rg-sq2016-dev.MSSQLSERVER	2833			HQTM-T850.tlucs.tn.tintri.com	1242.21	86 days over threshold
0	AdventureWorks2017	TSIS-AG-Node1.MSSQLSERVER	350	91.78	0.9	HQTM-DB-T5080.tlucs.tn.tintri.com	139.75	Not configured
0	VirtualizedDatabase3197	SQL-HamDB01.MSSQLSERVER	1960	17.7	0.7	HQTM-T850.tlucs.tn.tintri.com	216.56	Not configured
0	SalesKioskDF	rg-sq2016-dev.MSSQLSERVER	2148	22.48	0.6	HQTM-T850.tlucs.tn.tintri.com	408.12	Not configured
0	tempdb	inv-sq1.tlucs.tn.tintri.com.MSSQLSERVER	6	0.45	0.4	HQTM-DB-T5080.tlucs.tn.tintri.com	17.45	Not configured
0	TintriRocks	inv-sq1.tlucs.tn.tintri.com.MSSQLSERVER	398	3.17	0.3	HQTM-DB-T5080.tlucs.tn.tintri.com	16.3	Not configured
0	Scanner	inv-sq1.tlucs.tn.tintri.com.MSSQLSERVER	5423	69.9	0.3	HQTM-DB-T5080.tlucs.tn.tintri.com	270.13	Not configured
0	Finance	inv-sq1.tlucs.tn.tintri.com.MSSQLSERVER	1463	18.75	0.3	HQTM-DB-T5080.tlucs.tn.tintri.com	343.08	Not configured

Figure 1. Unparalleled visibility at the database level

By deploying SQL Integrated Storage, you can experience the difference that intelligent infrastructure can make in your data center. Integrated machine learning ensures high-performance even as database workloads change. Improve your visibility into SQL Server performance and workload patterns while gaining the ease of spotting changes and current infrastructure bottlenecks. DBAs can enjoy instantaneous cloning, regardless of size, to provide flexibility and improve development environments and DevOps workflows. Your administrative staff will experience a reduced number of escalations for storage tasks while simultaneously freeing up DBAs and infrastructure support resources to focus on higher ROI activities instead of antiquated storage related tasks. Plus, you'll benefit from advanced automation capabilities and automatic discovery of new databases.

With SQL Integrated Storage you can change your IT staff's daily experience by ditching restraints associated with last-generation technologies and limitations. Tintri is introducing new ways to accomplish age-old tasks, or simply deprecating them altogether. Make a break from the status and ask, "Why can't my storage do this?" With intelligent infrastructure, and SQL Integrated Storage, you can accomplish things thought previously impossible, empowering your DBAs and resetting expectations across the organization.

Experience Different! For more information on how Tintri SQL Integrated Storage can turbo-charge your databases and business success through a simple, Intelligent Infrastructure, visit [tintri.com/sql](https://tintri.com/sql). Or better yet, contact your Tintri representative or infrastructure partner and request a demo of the SQL Integrated Storage.



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