APTARE®

APTARE Goes Beyond Watch4Net in Highly-Heterogeneous Environments

Watch4Net may be fine for smaller, mostly homogenous networks, but APTARE provides complete visibility into growing, complex and heterogeneous environments

A holistic reporting solution should:

- Provide end-to-end visibility from host to LUN to backup to recovery—all in a single solution
- Include data protection reporting
- Support highly-heterogeneous networks

In the storage world, information is power. Knowing exactly what is in your environment and how storage is being used by applications and users gives organizations the power to meet the capacity and performance needs of the business and empower users to take advantage of dynamic opportunities as they arise.

In single vendor and mostly homogenous environments, capturing, analyzing, and reporting on this information is fairly simple. Hardware vendors practically give away their branded management software in hopes of keeping future revenue opportunities in the family. And for organizations that manage homogenous environments, using these solutions may make sense.

EMC's recent acquisition of Watch4Net is a great example. EMC offers its customers "a carrier-class performance management application that provides real-time, historical, and projected visibility into the performance of the network, data centers, and cloud infrastructures. ... [The solution ensures] consistent delivery of business services, detects, and troubleshoots problems quickly, and gains full visibility on the infrastructure performance and health."

But what if an organization manages a highly-heterogeneous storage environment made up of disparate hardware, network services and virtual machines? And what if the environment is constantly changing, growing, and evolving to meet dynamic storage demands. The answer isn't so easy. While Watch4Net is optimized for EMC networks, its capabilities are limited in mixed and growing environments. Organizations need a storage reporting solution that is scalable, able to provide a holistic view across highly-heterogeneous environments, and delivers actionable information up and down the chain of command from administrators to users to the leadership staff.

Seamless scalability and complete visibility into heterogeneous environments allows organizations to implement powerful and robust storage initiatives such as forecasting, chargeback, and auditing—that in turn help the organization deliver storage services more efficiently and more effectively to users and enable true business agility.

This white paper will explore:

- The benefits and pain points associated with managing expanding and highly-heterogeneous environments
- Characteristics organizations should look for in a holistic storage reporting solution
- The APTARE StorageConsole storage reporting solution
- The applications of having complete visibility into storage environments and the benefits to the organization

Storage Networks are Growing and Becoming More Complex

The data explosion over the past decade is showing no signs of abating. According to Gartner, the world created 1.8 ZBs in 2011, a growth rate of 9x over the past five years. That's zetta-bytes with a "Z" and 21 zeros. The same study concluded that our collective knowledge, measured in total data stored on the planet, effectively doubles every two years. Organizations need to be prepared to manage these rapidly growing environments, making sure storage infrastructure is fully utilized, protected, and secured. Management solutions that aren't able to scale to meet this growth will soon become a major liability.

At the same time, heterogeneous storage environments allow organizations to grow their environments responsibly and deploy storage solutions ideally suited to a specific business need. This ability, or vendor choice, gives administrators the freedom to provision the appropriate machines as capacity, workload, and budget demands change on the fly. Organizations that are locked into a specific vendor or a management solution with limited support for disparate platforms may not have the opportunity to build the type of flexible storage environments that can meet the dynamic challenges of today's global economy. Instead, they are fated to leverage whatever solution their single vendor deems suitable—unique needs, flexibility, and budget be damned.

However, despite their advantages, managing across heterogeneous environments can be tricky, and collecting pertinent management information across exploding networks can be a tedious, time-consuming process. Often, IT departments rely on "dudes with spreadsheets" to manually acquire storage data across environments. This leads to delays, incomplete data sets, human error, and misappropriation of resources that can be better spent on more strategic projects. The result is an inefficient storage management strategy that isn't able to meet the

current and future needs of the business, empower users with the financial impact of infrastructure decisions, prevent security and compliance failures, or enhance the utilization of existing resources.

Characteristics of a Holistic Storage Reporting Solution

Choosing a reliable storage reporting solution is critical when trying to maximize resources and ensure you have a handle on growing and heterogeneous environments. These solutions need to be able to scale for enterprise environments; provide end-to-end application visibility from host to LUN; include data protection reporting; and support multiple platforms.

The Need for End-to-End Visibility

Mapping storage from the host directly to the LUN provides powerful end-to-end application visibility that administrators can use to more efficiently and effectively provide capacity, performance, data protection, and security across storage infrastructures. Knowing exactly what LUNs each host is attached to makes it easier to optimize storage environments and accurately provision the appropriate resources—and at the right tier—for running workloads. Currently, most enterprise IT departments map these connections manually, relying on manual integration of multiple data sources at the host level and at the LUN level. Automating the process in a single reporting solution makes it possible to identify an application that is using only 20 TBs of its allocated 50 TBs. Armed with this information, administrators can reclaim and shift the additional capacity for other needs.

The Need for Data Protection Reporting

Data protection is a critical component of any storage strategy, ensuring that the organization's business information isn't lost or compromised. Visibility throughout the lifecycle of data—including backup, replication, and recovery—helps with utilization and compliance. Storage reporting solutions need to provide visibility into data protection processes and integrate that insight with visibility into the rest of the storage environment, creating a complete story of that data throughout its lifecycle.

The Need for Heterogeneous Support

Organizations cannot afford to rely on multiple reporting solutions to provide visibility into disparate hardware. Manually compiling management information is tedious, time-consuming, and fraught with human error, and integrating these solutions

through APIs can be complex and unreliable. A single solution is needed to automatically collect, house, analyze, and report management information from multiple storage and data protection platforms.

APTARE StorageConsole Ideal for Growing, Heterogeneous Environments

APTARE StorageConsole provides holistic visibility across growing, highly-heterogeneous environments. Inventory, capacity, usage, and backup data are consolidated on a single pane of glass, allowing administrators to access pertinent up-to-date information when and where they need it.

Agentless data collectors send relevant storage component information to the heart of the APTARE StorageConsole platform, an integrated and highly-scalable Oracle database that maintains current and historical data on the entire storage environment in a central location. From this database, each APTARE StorageConsole product can analyze and correlate relevant information, resulting in consistent analysis and reporting that enables IT administrators to manage all aspects of their storage environment.

In this way, APTARE provides end-to-end visibility throughout the data lifecycle process, from the host to the LUN to the data

protection environment and everything in between—including on dozens of storage and backup platforms. The information can then be easily exported to backup administrators, the application team, business unit managers, auditors, and the C-suite as intuitive dashboards and reports.
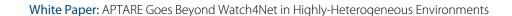
APTARE Enables Advanced Storage Initiatives

Unified visibility across the organization enables advanced storage initiatives that further streamline data protection and storage environments. Trending and forecasting, chargeback, risk mitigation, auditing and compliance, and utilization and optimization are all enabled by knowing exactly what is out on the network, who is using what, and how.

Capacity Planning

APTARE enables accurate trending and forecasting of capacity needs across the organization by automatically tracking storage usage in real time. The information is stored in an extensive database that can be analyzed and exported as various reports. Using a proprietary algorithm, the solution accurately predicts storage needs in the near term and future, allowing organizations to plan efficiently and avoid surprises. APTARE also gives organizations the hard cost-benefit data they need to make intelligent cloud migration decisions. More information.

Pain Point	EMC Watch4Net	APTARE StorageConsole
Storage environments are expanding quickly to meet increased demand.	Based on MySQL database, Watch4Net is great for environments up to 125 ESX servers, 2,500 virtual machines or 2,500 physical hosts.	Built on a highly-scalable Oracle database, APTARE supports10 to 20 times the amount of ESX servers, virtual machines and physical hosts than Watch4Net.
Data flows throughout the organization over the course of its lifecycle, but it's important to track data everywhere it is stored, backed up, and replicated.	Watch4Net centralizes application and network performance data in a single solution.	APTARE goes several steps further by mapping data throughout the entire lifecycle from host to LUN to backup to recovery—all in a single solution.
Vendor lock-in makes it difficult to deliver storage solutions in line with the organization's needs.	Watch4Net is optimized for EMC environments or semi-heterogeneous environments.	APTARE supports the industry's widest range of storage and backup environments, giving organizations the best chance of developing storage solutions that work. Full list of supported platforms.
It's difficult and time-consuming to integrate disparate management solutions.	An acquired technology, Watch4Net works well with other EMC management products.	Built organically, StorageConsole provides complete and holistic visibility throughout highly-heterogeneous and growing storage environments on a single pane of glass.

Chargeback/Metering

Automatically collecting storage data across all devices regardless of platform or physical location, APTARE StorageConsole solutions provide the visibility into storage processes, capacity and usage necessary to enable an effective chargeback strategy that aligns storage use and costs to individual business units. This enables a better understanding of how specific business decisions, projects, and initiatives impact storage costs and allows organizations to optimize existing resources. At the same time, chargeback and to a greater extend metering allows organizations to better plan, predict, and charge accurately for storage usage per user or business unit. Data that is stored in multiple places for data protection and disaster recovery is recognized and tabulated appropriately, and virtual machines that tend to be spun up and spun down quickly are taken into account in real time, ensuring that the true cost of storage is calculated accurately and efficiently. **More information.**

Risk Mitigation

APTARE puts intelligence behind an organization's alerting systems by eliminating unnecessary noise and giving administrators pertinent, actionable information. Rather than poring over spreadsheets and backlogs of alerts from multiple tools, administrators are armed with intelligent, actionable information in a single management platform that allows them to eliminate repetition and focus on truly critical problems that are identified quickly before they turn to major issues. **More information.**

Auditing/Compliance

APTARE automatically collects backup and storage information in real time, providing authorized access to internal and external auditors whenever it is needed. By making compliance data continuously up-to-date and available on demand, APTARE dramatically reduces the complexity typically associated with compliance reporting. Streamlining the auditing process through APTARE can help organizations reduce the budget

they are spending on maintaining compliance, and managing compliance year-round allows organizations to catch potential problems early, helping them to reduce surprises and prevent fines and penalties. **More information.**

Utilization/Optimization

A multi-vendor storage reporting solution, APTARE tracks utilization on the device and business unit level, giving organizations more accurate and complete insight into storage usage across platforms. This allows administrators to provision with confidence, making capacity adjustments on the fly based on real-time data. Accurate storage reporting information enables the use of these advanced technologies, allowing organizations to take advantage of the dynamic architectures that create efficiencies, improve utilization, and optimize resources. Administrators spend less time tracking down and analyzing management data, letting APTARE consolidate the information for them in a single dashboard. **More information.**

Conclusion

Single-vendor solutions with limited support for other storage platforms such as EMC's Watch4Net are great at tracking performance information across homogenous environments. However, organizations with growing and highly-heterogeneous environments need a storage reporting solution that provides holistic visibility across vendors, platforms, and geography on a single pane of glass. APTARE StorageConsole does just that, providing organizations with a scalable solution that automatically collects, stores, analyzes, and reports on storage information across the entire organization—even tracking data throughout its lifecycle from host to LUN to backup to recovery.

For more information please visit **APTARE.com.**