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Software

SANscreen Capacity Manager

Make better capacity purchase decisions and simplify the provisioning process

KEY BENEFITS

Make Better Purchasing Decisions
Make smart capacity purchase decisions with global visibility into storage resource allocation.

Accurately Charge Back for Services
Provide accurate chargeback reports for the services your storage team delivers.

Optimize Resource Utilization
Manage reservations and forecasting to maximize resource usage.

Lower Storage Costs
Reduce the need for excessive spare capacity with a clear tier-aware demand pipeline.

Accelerate Application Provisioning
Implement an accurate and repeatable provisioning process that minimizes the need for rework.

SANscreen® Capacity Manager leverages the service information discovered by SANscreen Service Insight to provide you with real-time visibility into global resource allocations, rule-based automated service tier management, and utilization and chargeback reports. By managing the end-to-end provisioning process, Capacity Manager helps you accelerate application provisioning, manage reservations of different resources, and accurately forecast based on future demand.

THE CHALLENGE

Capacity management
Successful capacity management involves managing the capacity allocation lifecycle; having the most accurate data for past, current, and future needs; and making educated decisions based on this information.

Given the complexity of today's data center environments, even the simple task of understanding current resource allocation can be problematic. Additionally, many companies use an unstructured provisioning process and rely on robust reservation capabilities. It is difficult to gain insight into future demand and make the right purchasing decisions.

Capacity management and provisioning challenges include:

- Lack of mapping between applications and networked storage resources and inability to interpret historic usage trends
- Inability to effectively manage tiered services to optimize the usage of existing resources
- Making provisioning decisions based on stale information maintained in spreadsheets, leading to mistakes, inefficient provisioning plans, lower quality of provisioning service, and delays in deployment of new application services
- Overinvesting in standby capacity to avoid delays, brownouts, and outages
- Dealing with incorrect provisioning, latent quality issues, or outages that result from complex, unstructured processes

You put your operations at risk when you rely on expensive overprovisioning and substitute guesswork for data when making capacity management decisions.

THE SOLUTION

Global allocation visibility
To help you optimize your networked storage resources and drive accurate, capacity-related business decisions, Capacity Manager provides global resource allocation information by data center, tier, and business unit. Its discovery and data collection are automated, global, and agentless, and its reporting can be configured by time periods (weekly, monthly, or quarterly).

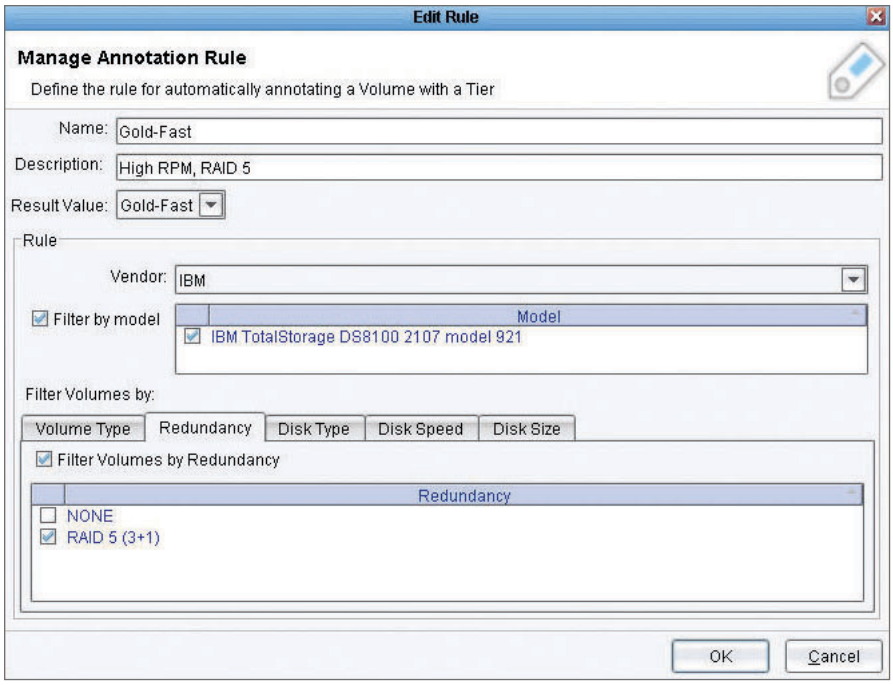

Figure 1) Rule-based tier management.

Capacity Manager helps you decide what, when, and where to purchase capacity by providing accurate information that includes:

- Application, host, and business unit resource and path mapping
- Utilization across data centers, arrays, and switches
- Historical allocation trends for application and business units
- Visibility into resource availability threshold status, allowing users to quickly understand which resources have crossed the minimal threshold and should be replenished
- End-to-end path-aware information—resource mapping to an application is counted considering all types of configurations, including cabling, zoning, masking, and mapping, to enable accuracy

You can dramatically reduce labor costs by eliminating the need to manually gather and compile resource allocations and application chargeback data. To help you identify potentially wasted resources, Capacity Manager provides a view of allocations matched with user capacity requests and flags unauthorized allocations done without a corresponding user request.

IMPROVE MANAGEMENT OF TIERED SERVICES

Capacity Manager extends the definition of tiering beyond the basic tier-by-vendor model. You can improve enterprise-level tier resource usage and the accuracy of cost accounting using Capacity Manager's sophisticated set of rules and flexible tier definitions to automate association of tier levels to resources.

With Capacity Manager you can implement more granular tiering—including by volume redundancy, volume type, disk speed, disk size, and disk type. You can perform analysis and generate reports based on tiers and automatic annotations indicating data center, business unit, and project information.

Better match applications to tiers of service

To better match applications to a tier of service, Capacity Manager provides a snapshot of the tiers of service each host can access to enable service-level-agreement verification. You can assign costs to different networked storage resources (storage tier and switch ports), then generate reports that include the cost of allocated services for each tier. Business unit line managers can use this report to determine the appropriate tier of service needed.

Reduce overhead related to tier management

You can easily track assets by tier, pricing, business unit, data center, and project with our unified data model. Capacity Manager enables exceptions to the automated tiering rules to provide tier definition flexibility and allow the use of additional tier criteria beyond the existing rules. Historical allocation reports include allocation by business unit and service tiers, whereas utilization reports include tier information as well as a breakdown by business unit, data center, array, and fabric. Capacity Manager also interoperates with external systems for tier assignment.

Accurately charge for tiered services

Capacity Manager provides reports based on path-aware usable networked storage resources. By including detailed line-item information that highlights allocation and deallocation historical activity by tier, these reports enable you to accurately charge for the services your storage team delivers and run your IT organization like a business.

Using Capacity Manager, you can efficiently provide transparent and accurate allocation auditing for each business unit. Capacity Manager provides chargeback summary and business unit reports, offering visibility

Table 1) Additional Capacity Manager features.

FEATURE	DESCRIPTION
Web Services API	Integrates with other information systems and integrate the provisioning process with external processes.
Interoperability	Uses existing organizational competencies. Supported languages include Perl and Java.
Code Samples in Perl and Java™	Accelerate prototyping and integration.
Request Creation	Assigns new and existing hosts as resource targets and describes requirements in terms of LUNs, size, and tier level.
Request Cancellation	Cancels requests from external information systems.
Lifecycle Monitoring	Enables communication with devices via IP-based management access.
Distributed Discovery	Tracks each step of the provisioning process (new request, reservation stage, ready for implementation, or complete) and communicates the status to other systems.

into the consumption of tiered services by all business units; and a historical allocation audit offering insight into what was allocated. You can greatly reduce the time and cost required to gather data and compose chargeback reports using Capacity Manager's automated discovery of allocation mapping between business units, applications, and resources. Capacity Manager helps you further reduce costs by providing configurable time-period reporting and automatic distribution of chargeback reports.

ACCELERATE APPLICATION PROVISIONING

SANscreen Capacity Manager manages the entire allocation order process and accelerates application provisioning by giving you real-time information on available resources.

Minimize the need for rework
Capacity Manager enables a repeatable provisioning process that minimizes the need for rework and helps you manage the end-to-end provisioning process by providing the following capabilities:

- End-to-end process management structures the process into clearly defined steps (request, requirements, reservations, and implementation).
- Request forms provide a simple interface for creating a request through a Web form or API.
- Target specifications allow you to define targets as existing host(s), new hosts, or applications.
- Requirements specifications allow you to specify the required switch ports, the amount, the size of LUNs, and tier level of service.
- Efficient reservations help you manage reservations of different resources.
- Action item list generates and maintains a provisioning action item list for you.
- Validation confirms that your provisioning plans are correctly implemented in a timely fashion by discovering changes, matching them to action items, and checking off completed tasks.

Optimize the provisioning process
With SANscreen Capacity Manager, you can optimize the quality and efficiency of the provisioning process each step of the way. Capacity Manager provides best-practice assistance during the provisioning process. It flags provisioning process violations, highlighting incorrect implementation or potential problems in the provisioning process, such as overdue action items, incorrect tier-level reservations, physical location mismatches of targets and reservations, and reservations of resources that are past their end-of-life or sunset dates. With Capacity Manager, you'll enjoy a streamlined process with fewer mistakes, reduced reservation collision, and less rework.

REDUCE USAGE INEFFICIENCIES

You can reduce the need for excessive spare capacity and optimize resource usage using Capacity Manager's reservation pools for resources and its enablement of tier- and reservation-aware forecasts.

Capacity Manager's reservation and forecasting processes help you establish a clear demand pipeline for accurately planning and justifying future capacity purchasing decisions, reducing capital expenditures by decreasing the required safety capacity. Using the Future Utilization Reports feature, you can generate reports that accurately project the future reserve requirements of resources. Additionally, Capacity Manager helps you allocate the most appropriate tier of service to an application, resulting in lower capital expenditures and enabling more optimized usage of existing resources. It does so with:

- Tier-aware reservation system includes tier-level specification as well as tier-aware reservation and flagging of mismatches between the two.

- Request cost estimation eliminates resource overbooking and enables future availability.
- Resource pools maintain resource information such as switch ports, existing LUNs, or raw capacity.
- Reservation enforcement prevents team members from reserving an already reserved resource.
- Resource violations are issued when resources are allocated incorrectly.

Capacity Manager also helps you reduce capital expenditures by managing canceled request cycles to reduce orphaned resources. Its reverse allocation provisioning plan provides a rollback plan in case of request cancellation to enable full resource reclamation. By providing a single place where reservations are managed, central reservations management can reduce the overhead required by your storage team to manage additional spreadsheets and other ad-hoc reservation methods.

SIMPLIFY THE PROVISIONING PROCESS

Capacity Manager simplifies the provisioning process and reduces associated risks so that your front-line support engineers can create and implement service provisioning action plans.

Improve collaboration among all stakeholders
Capacity Manager streamlines the provisioning process for the different stakeholders. Business line managers can easily create service requests and follow up on their progress using a simple Web interface or other information system. Capacity Manager generates and maintains a provisioning action item list that can be sorted by time, requestor, priority, or project, which is then used to automatically validate that provisioning action items were implemented and check them off.

You can mitigate the need to have a senior SAN expert involved in the provisioning process using Capacity Manager's assisted decision process, which offers best-practice assistance to SAN team members during the reservation process and provides a simple way to make safe decisions.

Create a repeatable provisioning process
Enable support engineers and new team members to achieve provisioning goals in a repeatable and structured manner using Capacity Manager. Using Capacity Manager, all team members can follow the same process, regardless of their skill level. Capacity Manager's action item list and its automatic validation against implementation provide a powerful tool to help IT manage the provisioning process.

TAKE THE NEXT STEP

For more information on how Capacity Manager can benefit your business, contact your NetApp SANscreen representative or visit our Web site at www.netapp.com/us/products/management-software.

Table 2) SANscreen server requirements.

REQUIREMENTS	UP TO 5,000 PORTS	5,000+ PORTS
Operating System	Microsoft® Windows® Server 2000 or 2003 with the latest SP	Microsoft Windows Server 2000 or 2003 x64 version with the latest SP
CPU	Dual Pentium® processors or equivalent (2.4GHz+ recommended)	Quad CPUs highly recommended
Memory	4GB RAM	8GB+ expandable RAM highly recommended
Disk Space	20GB available hard-disk space	
Network	100Mb per second/1Gb per second Ethernet connection with dedicated IP address with IP access to all of the SAN devices in the environment	
Permissions	A minimum of local administrator permissions required	
Remote Connectivity	Internet connectivity to allow WebEx access and/or a remote desktop connection to facilitate installation and post install support	

NetApp creates innovative storage and data management solutions that accelerate business breakthroughs and deliver outstanding cost efficiency. Discover our passion for helping companies around the world go further, faster at www.netapp.com.

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