

# Dell EMC Storage Resource Manager (SRM)

Visualize, analyze and optimize your storage environment

## Essentials



### Storage Resource Manager

#### Visualize:

- View relationships and topologies from application to storage array
- Correlate application health with storage key performance indicators (KPIs)

#### Analyze:

- Gain insight into block, file, and object capacity utilization across multivendor, traditional and software-defined storage environments
- Validate configuration compliance
- Simplify configuration change planning through what-if analysis

#### Optimize:

- Align application workloads to the right tier of storage
- Streamline capacity planning via automated trends analysis
- Increase cost transparency through multitenant, chargeback or show-back reporting

## Control Storage Costs

According to leading industry analyst estimates, the data managed by enterprises is expected to grow to over 40ZB by 2020. Today's datacenters must be architected for web-scale and capable of managing billions of users and millions of applications. They must be designed for speed, agility, mobility and growth. Rapid data growth combined with increased service level expectations introduces new management challenges for traditional storage environments. Dell EMC Controller enables IT to create a web scale infrastructure leveraging existing storage investments. SRM is a comprehensive monitoring and reporting solution that helps IT visualize, analyze, and optimize today's storage investments while providing a management framework that supports investments in software-defined storage.

## Visualize

SRM was built to manage the complexity of growing, heavily virtualized storage environments. With SRM, you obtain detailed relationship and topology views from the application, to the virtual or physical host, down to the LUN to identify service dependencies. You can view performance trends across the data path and identify hosts competing for resources. SRM enables you to understand and manage the impact that storage has on your applications. With this improved insight, you can optimize storage resources to control the cost of rapid data growth.

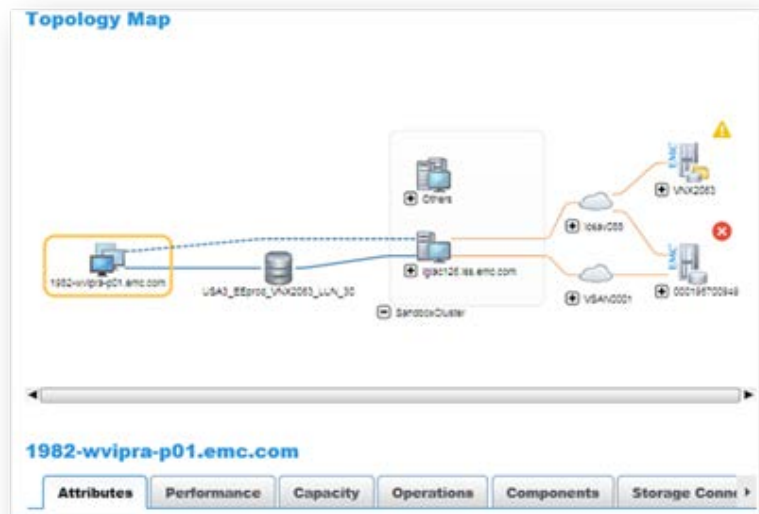


Figure 1: Visualize Infrastructure performance, health, availability and configuration.

## Analyze

SRM helps you analyze health, configurations and capacity growth. You can quickly spot SLA problems through custom dashboards and reports that meet the needs of a wide range of users and roles. With SRM you can also track block, file and object capacity consumption across your data centers with built in views to help you understand who is using capacity, how much they are using, and when more will be required.

**Service Level Capacity**

4 elements found, displaying 1 to 5.

Service Level	Usable (GB)	Used (GB)	Free (GB)	Used Trend	% Used
<b>FAST VP</b>	17,747.00	16,472.38	1,274.62	16,472.38	92.82
Gold	15,693.50	12,833.90	3,059.60	12,833.90	88.50
Bronze	196,583.00	177,817.00	20,766.00	177,817.00	89.54
Platinum	32,006.00	5,729.12	26,276.88	5,729.12	17.90
Other	17,464.39	884.81	16,579.58	884.81	5.08
<b>TOTAL</b>	<b>281,414.77</b>	<b>245,637.31</b>	<b>35,777.46</b>		

**FAST VP**

3 elements found, displaying all elements. 3 columns have been hidden.

Array	Vendor	Array Model	Service Level	Usable (GB)	Used (GB)	Free (GB)	Used Trend	% Used
vm-8519	EMC Corporation	VN05000	FAST VP	12,845.38	12,824.60	20.78	12,824.60	99.84
vm-2378	EMC Corporation	VN03600	FAST VP	1,157.26	0.00	1,157.26	0.00	0.00
vm-1582	EMC Corporation	VN07600	FAST VP	3,744.36	3,647.78	96.58	3,647.78	97.42
<b>TOTAL</b>				<b>17,747.00</b>	<b>16,472.38</b>	<b>1,274.62</b>		

Figure 2: Analyze capacity utilization by service level.

You can also continuously validate compliance with your design best practices and the Dell EMC Support Matrix to ensure your environment is always configured right to meet service level requirements. And, you can define service levels and track consumption by disk technology, RAID type, array model, FAST policy or VMAX 3 Service Level Objective to understand where and how capacity is being consumed.

**All Active Breaches** | All Inactive Breaches

**Breaches**

21 elements found, displaying 1 to 5.

Severity	BreachName	Device	Device Type	Affected Objects	Policy	Rule	Creation Time	Last Modified Time	Status
MAJOR	Base Connectivity Interoperability for Hosts	ipw0201.lee.emc.com	Hypervisor	Array:00198700932	EMC Support Matrix	Base Connectivity Interoperability for Hosts	2016/03/21 13:28:29 EDT	2016/03/21 13:51:47 EDT	ACTIVE
MAJOR	Switched Fabric Topology Interoperability	102000011E30C00	Fabric	Switch: iscan0220[switch-17]	EMC Support Matrix	Switched Fabric Topology Interoperability	2016/03/21 13:28:29 EDT	2016/03/21 13:51:47 EDT	ACTIVE
MAJOR	Base Connectivity Interoperability for Hosts	ipw0101.lee.emc.com	Hypervisor	Array:00198700904	EMC Support Matrix	Base Connectivity Interoperability for Hosts	2016/03/21 13:51:48 EDT	2016/03/21 13:51:48 EDT	ACTIVE
MAJOR	Switched Fabric Topology Interoperability	102000013408F04	Fabric	Switch: ipw0178	EMC Support Matrix	Switched Fabric Topology Interoperability	2016/03/21 13:28:29 EDT	2016/03/21 13:51:47 EDT	ACTIVE
MAJOR	Base Connectivity Interoperability for Hosts	ipw0102.lee.emc.com	Hypervisor	Array:00198700952	EMC Support Matrix	Base Connectivity Interoperability for Hosts	2016/03/21 13:28:29 EDT	2016/03/21 13:51:48 EDT	ACTIVE

Figure 3: Continuously validate compliance to best practices and the Dell EMC Support Matrix

## Optimize

SRM helps you optimize capacity and improve productivity to get the most out of your investments in block, file and object storage. It shows historical workloads and response times to determine if you have selected the right storage tier. It tracks capacity use by service level, FAST policy or VMAX 3 Service Level Objective allowing you to create show back or chargeback reports to align application requirements with costs.

It analyzes relationships between primary storage and replicas to identify the total capacity used to support an application. And, it tracks consumption of thin pools and storage groups to predict when more capacity will be required. This allows storage teams to make greater use of thin provisioning to improve utilization. Detailed capacity reporting improves planning to enhance purchasing processes and reduce costs. Armed with this information, you can optimize your storage environment to improve your ROI.



Figure 4: Analyze performance trends and storage workloads.

SRM offers a multi-tenant, browser based interface that allows you to stay productive even while away from the office with access anywhere and on any device. You can even download our app from the Apple App Store to stay connected. Figure 5: Stay connected with mobile access.



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