



STORAGE**FUSION**
AN AVISEN PLC COMPANY

Storage Resource Analysis

Comprehensive analysis of your global storage estate in the same business day



Implementing and Using SRA

Step 1: Review your supported devices



(**Additional supported devices)

- **SRA** is delivered via an elegant, intuitive, interactive portal following sophisticated analysis of storage configuration data.
- Data is gathered from multiple vendor (heterogenous) storage arrays across multi-site locations.
- Combines data into a single portal view with drill down capability from enterprise level to an individual disk on an array.
- **Please review the Storage Fusion Partner Portal for updates on the definitive list of supported devices

Step 4: The clever stuff!

- **SRA** carries out complex and sophisticated analysis of the storage configuration including mapping the relationships between disk groups, LUNs, clones, mirrors, snaps, replication, virtualised and thin provisioned storage, host connections and the SAN Fabric
- **SRA** will highlight corrupt, missing or incorrect files at the beginning of the process and report these back to the customer for rectification. For example, **SRA** may identify array relationships that the customer presumed were not linked and therefore didn't provide the corresponding data files for the second array.
- Results in a fully qualified analysis - never a case of "rubbish in, rubbish out!"



Step 2: Data Collection

Two simple methods to gather data:

1. Via a Service Language Command (SLC) provided by all storage vendors, issued to the arrays via their device management software. These are standard implementations so there are no pre-requisites for **SRA** that limit or complicate use. Storage Administrators would be familiar with this interface and Storage Fusion provide an SLC reference for the data collection process.
2. For larger storage devices and estates, Storage Fusion provides a fully automated script to execute the appropriate commands. The relevant output data files are created automatically and therefore not susceptible to user error. Collection scripts are available for Windows, Solaris, HP-UX, AIX and Linux systems.



Step 3: Send the output to your SRA host

- Send configuration data to Storage Fusion in a zip file format for analysis by **SRA**.
- Data is uploaded to a customer specific, secure FTP server, utilising security precautions.
- Once uploaded, data is analysed by **SRA** and the resultant analytics are viewable in a secure and intuitive **SRA** web portal.



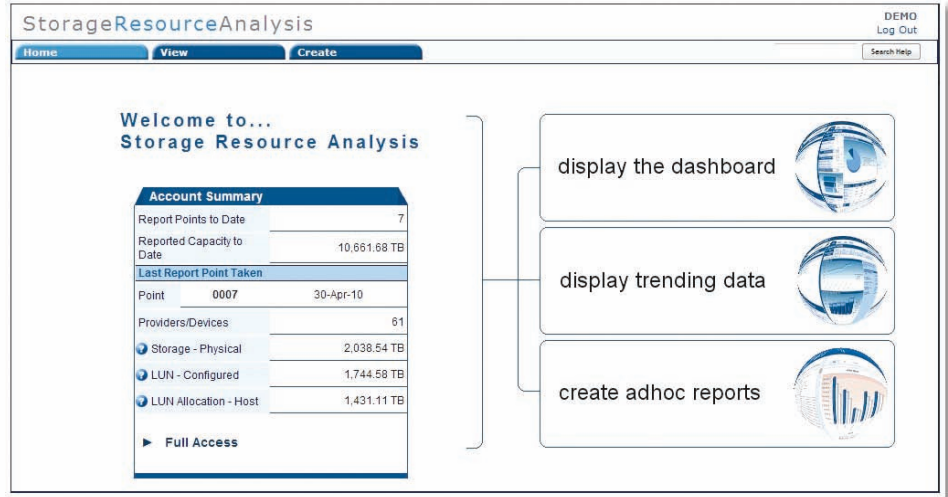
Step 5: Login to your SRA portal

- Find out things that you never knew about your storage estate in the most intuitive, secure and comprehensive reporting service available for storage professionals!
- All **SRA** Portal transactions use HTTPS, allowing secure communication.
- Browser displays padlock icon and website encrypts the session with a digital certificate from an approved certificate authority.

Your Personalised SRA Portal

Once logged into **SRA**, your personalised landing page provides three options; display the dashboard, display trending data or create ad-hoc reports.

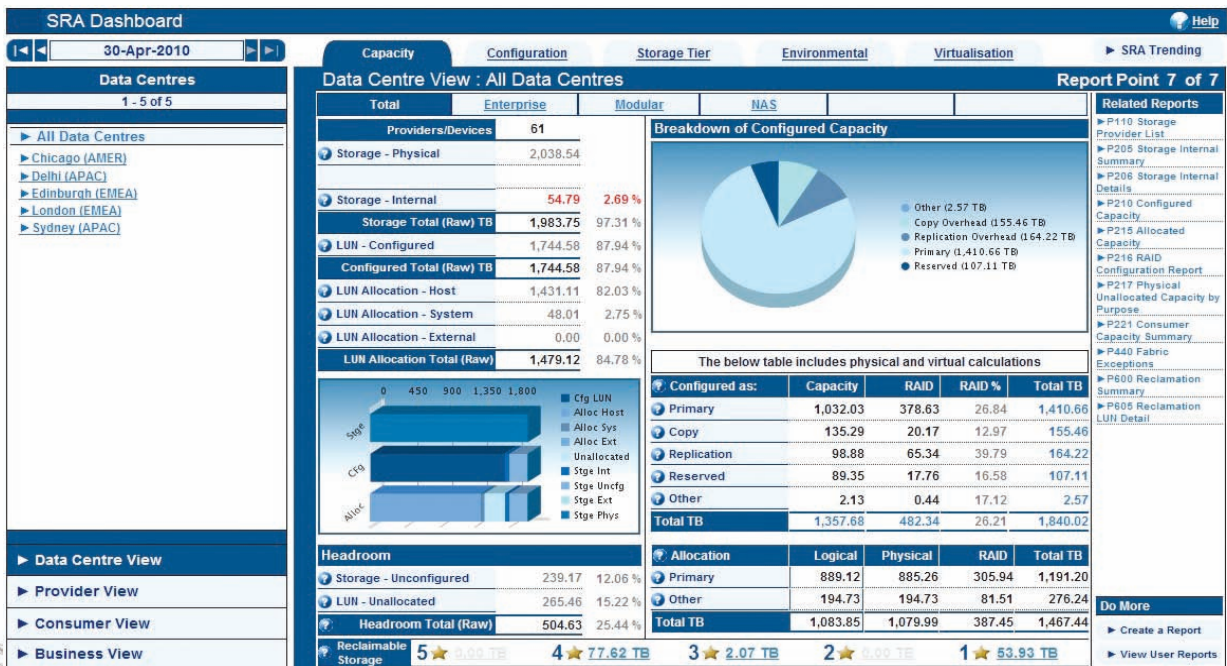
The primary source of initial information is the 'display the dashboard option'. If this is selected, users will then have a choice of six interactive dashboards to choose from, which all include an online help facility.



SRA Interactive Dashboards

1. The Capacity Dashboard

Provides an interactive 'single pane of glass' view of the total enterprise wide storage capacity.



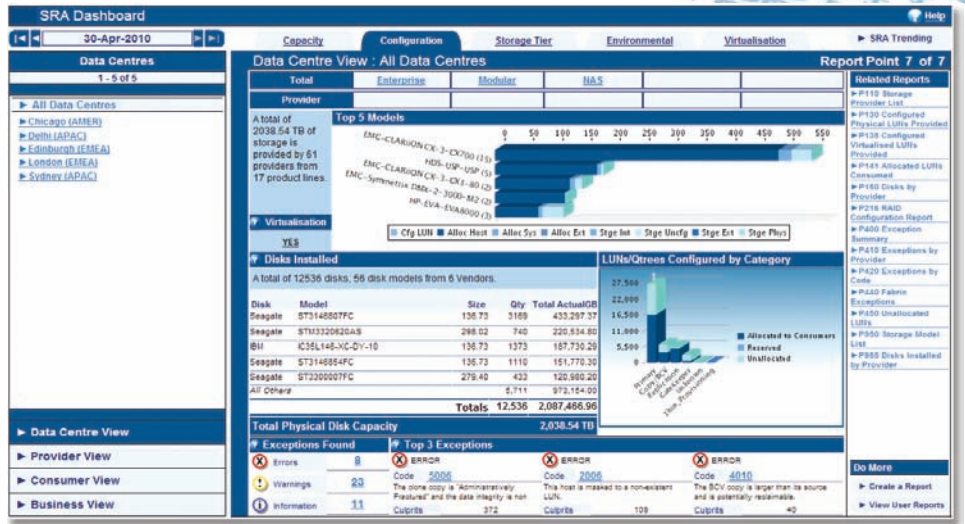
This dashboard also includes a summary of reclaimable storage candidates categorised by ease of reclamation.



SRA Interactive Dashboards

2. The Configuration Dashboard

Gives administrators true insight into how their heterogeneous storage estate is installed, configured, tiered, allocated and assigned. Provides a summary and a drill-down option to detailed topology diagrams. Includes configuration exceptions and anomalies, which have been described by some customers as 'sleeping catastrophes'.



In the example shown below there are 8 Errors (critical), 23 Warnings and 11 Information exception types. This example shows there are 520 occurrences of the "Top 3 Exceptions" of the 8 Error types in this configuration. It is very common for SRA to discover thousands of exceptions in a large storage estate.

Exceptions Found		Top 3 Exceptions		
Errors	8	ERROR	Code 5006	The clone copy is 'Administratively Fractured' and the data integrity is non
Warnings	23	ERROR	Code 2006	This host is masked to a non-existent LUN.
Information	11	ERROR	Code 4010	The BCV copy is larger than its source and is potentially reclaimable.
		Culprits	372	
		Culprits	108	
		Culprits	40	

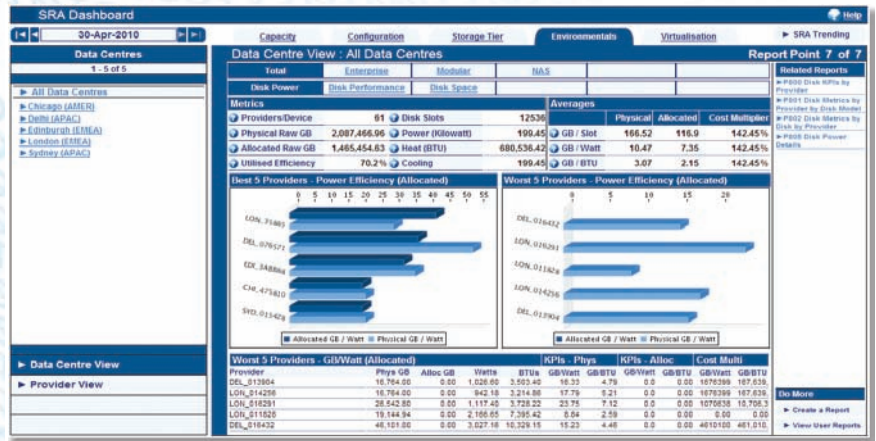
3. The Storage Tier Dashboard

Assesses how your storage is tiered by array performance (hardware). This is a true indication of the performance and therefore cost of the tier and the associated storage and storage overhead allocated to each performance tier. A custom tiering option is also available.



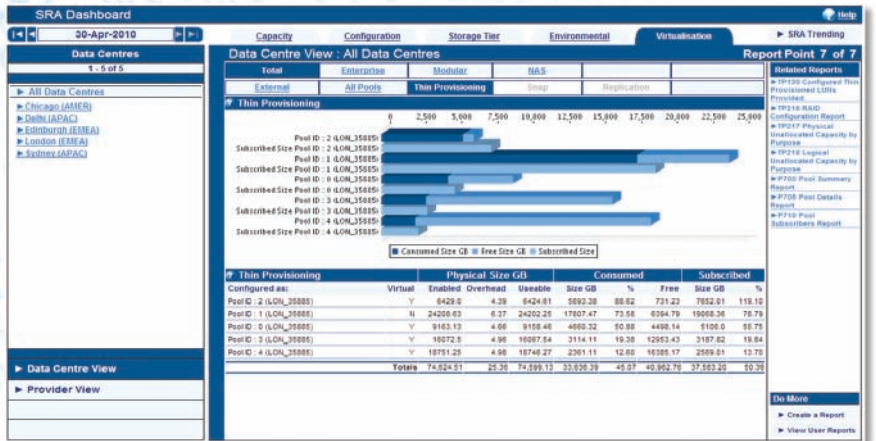
4. The Environmental Dashboard

Calculates the generic power and heat consumption specific to the installation and then compares this to the storage density and allocated capacity on an array by array basis. Delivers transparency on the efficiency of the storage estate.



5. The Virtualisation Dashboard

Displays information and drill down capability for arrays that implement thin provisioning and external storage virtualisation.



6. The SRA Trending Dashboard

Provides trending against criteria associated with the other dashboards.



SRA Reporting Capabilities

SRA features include a very elegant ad-hoc report writer and the ability to export charts and reports in all the common document formats.

“Superior storage analytics is the foundation for efficiency and compliance. Storage Fusion’s Storage Resource Analysis will maximise your current storage infrastructure, allow you to plan more effectively and significantly reduce future capital expenditure”.

Contact

For further information, please contact Storage Fusion on +44 (0)1707 387 100 or visit www.storagefusion.com