

Storage Decisions

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The Storage Reports Pyramid


6 steps to identify the most important storage reports for your practice

Norbert Haag
Storage Consultant

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The Sphinx



- **Lying crouched on a rock, she accosted all who were about to enter the city of Thebes by asking them a riddle.**
- **If they could not solve the riddle, she killed them.**
- **Moral: Sometimes answers are vital.**

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What answers do I need?

Questions about storage revolve around 6 areas:

- Usage
- Hardware
- Risk
- Growth
- Current state
- Efficiency

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First things first

Current state
Growth
Usage
Efficiency
Risk
Hardware

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Current state

- **How much storage do we have today?**
 - Highest level overview
 - Gives us an idea about the dimension we need to handle (What league are we in?)
 - Helps us to break down overall cost (average hardware cost per MB/average labor cost per MB)
 - Is our 30,000-foot view of the storage environment
 - Possible to gather manually (but not recommended)

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Growth

- **Where are we heading toward?**
 - What growth do we face within a given timeframe?
 - How does the curve look? (straight, peaks and valleys, which, why)
 - What impact will that growth have without any change? (cheaper hardware, more staff, location, etc.)
 - Growth indicates the general direction that the storage practice is going.
 - Might be measured manually (not always possible and not recommended)
 - Is the prerequisite to validate future expenditures

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Usage

Usage

- **Is the Holy Grail of profit centers**
- **Breaks down cost and requirements to applications**
- **Must be measured to implement charge back**
- **Cannot be gathered manually**

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Usage

Elements of Usage reports

- **Application or application group/User**
- **Baseline**
- **Growth**
- **Consumption/timeframe**
- **Cost/Unit (MB, etc.)**

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Efficiency

Efficiency

- **How much space is used, free and unallocated?**
- **How much space is blocked with useless data or data that need not be online?**
- **Is data stored on appropriate storage?**
- **Cannot be gathered manually**

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Risk

- How much data has to be backed up per backup cycle?
- How long will the current backup strategy work given the current growth?
- How much data is backed up?
- Is the gap between data that needs to be backed up and that is backed up widening?
 - How quick?
- How much data has to be recovered in what timeframe after a disaster?
- Cannot be gathered manually.

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Hardware

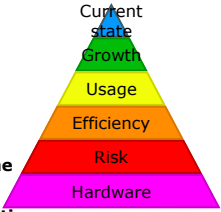
- What data resides on what storage hardware?
- What elements are in the data path for a given application? (switches, etc.)
- What RAID level is implemented for a given application?
- What is the configuration of the hardware?
- What is the fill level of the storage arrays?
- Cannot be gathered manually

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Wrap up

- The storage reports pyramid helps to categorize and prioritize the most important storage reports.
- It is easy to understand and incorporates all areas that need attention.
- It gives a useful and workable approach to pick those reports essential for the storage practice.
- It provides support in evaluating storage reporting tools.



The diagram is a pyramid divided into five horizontal layers. From top to bottom, the layers are: 'Current state' (blue), 'Growth' (green), 'Usage' (yellow), 'Risk' (red), and 'Hardware' (purple). A small blue triangle points upwards from the top of the pyramid.

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Thank you. Questions?

Mr. Haag will be available at the Ask-the-Experts booth in the Exhibit Hall:

Monday 4-5 PM

Tuesday 4-5 PM
