



Storage Decisions

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# RFP Workshop for Storage Resource Management (SRM) & Policy-Based Management

## Creating RFPs That Achieve The Right Results

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## Agenda

- **Introduction**
- **Changing Role of Storage Resource Management**
  - Convergence, ILM and Utility Computing
- **Where to Start: Key buying criteria**
- **Vendor Selection Considerations: The list**
  - Priorities and the Worksheet...
- **5 Gotchas to Consider During Selection Process**
- **Red Herrings to Look For from Vendors**
  - Key questions to ask vendors
- **Final recommendations**

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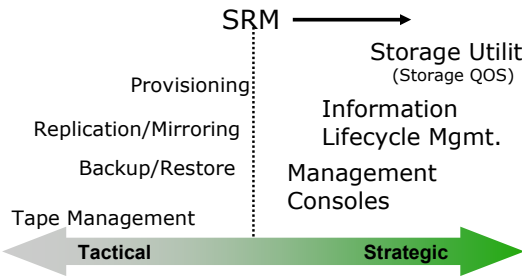
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## SRM Can Be Both Strategic & Tactical



SRM →

Storage Utility (Storage QOS)

Information Lifecycle Mgmt.

Management Consoles

Provisioning

Replication/Mirroring

Backup/Restore

Tape Management

Tactical → Strategic

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## How SRM Fits Into Management Taxonomy

The diagram illustrates the Management Taxonomy, structured as follows:

- APPLICATIONS**
  - Enterprise Storage Resource Management** (highlighted with a red oval)
    - Storage Automation/Provisioning
    - Capacity/Resource Management
    - Management Consoles/Dashboards
  - Policy Management
- Data Management**
  - Backup/Store
  - Data Replication
  - Hierarchical Storage Management
  - Data Mobility
- Infrastructure Management**
  - Device Management
  - Storage Virtualization
  - Storage Network Management (Fabric)

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## Storage Resource Management

- **Core SRM features**
  - **Capacity management**
    - File level, application specific data
    - Growth of file system
    - Location of data
  - **Availability Analysis**
    - Fault detection
    - Logging of ongoing operational issues
  - **Performance management**
    - Array and network performance analysis
  - **Chargeback/billing**
    - RDBMS/XML architecture to export for billing
    - Reports/templates

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## The Convergence Today

- **Management console foundation**
  - SRM integration
  - SAN Management integration
  - Provisioning/automation/workflow automation and integration
- **Longer-term: Automation with HSM, backups, replication and infrastructure management**
- **Upshot: SAN Management and SRM becomes integrated into management consoles**

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## What's Changing in 2004

- **SRM takes a broader view as we look to the utility model**
  - Management Consoles drive SRM functionality
  - Increasingly includes service managers
    - Identification of storage processes
    - Application specific storage
    - Workflow engine integration
    - Service levels (and SLA enforcement)
- **SRM will integrate with ILM strategies**
  - Crucial to the lifecycle process will be capacity mgmt.
  - Service levels during the lifecycle

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## Key SRM Facts

- Most products host-, file- or array focused.
- Few integrate with HSM and backup/restore.
- Good SRM products provide multiple views to manage physical/logical capacity.
- Some are beginning to provide modules in support of applications, such as e-mail, content mgmt., DBMS.
- Vendor support is not universal.
- Enterprise scaling remains largely unproven.
- This is an early market; vendors will innovative aggressively so making the right choice counts.

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## What This All Means



- **The selection process becomes more important.**
  - Feature details
  - Strategic planning a bigger factor
  - Alignment with specific application and operations
  - Integration increasingly important...
- **Doing your homework before finalizing your selected SRM product is essential.**
- **Vendor preferences need to be fully documented.**
- **Expect a longer selection process.**
  - Make sure you can defend your choices.

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## Mapping Into Top SRM Priorities

- 1. Cost**
  - SRM product pricing greatly varies due to functionality
  - Cost per managed TB most common today
  - Lifecycle: e.g., training, maintenance and ongoing labor
- 2. Technology Architecture**
  - Agent vs. agent-less
  - Database vs. flat file: DBMS key for data export
- 3. Support: Vendors, standards, storage types, applications...**
  - A Gotcha: These are not universally similar.

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## Top SRM Priorities (con't)

- 4. Ease of use**
  - Think about the staffing requirements
  - Training
  - Role-based management
- 5. Quality of Data Output**
  - Report flexibility, templates
  - Predictive analysis
  - Performance/Availability analysis for SLAs
  - Depth of reporting structure
  - Passive vs. active management

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## The Worksheet: Feature Evaluation and Priority



- Broken up into 3 columns
- Key Feature Element To Evaluate
  - Grouping of product features to grade
- Sub-Features To Evaluate
- Your priority
  - 5=Mandatory feature
  - 4=Somewhat needed
  - 3=Neutral
  - 2=Don't really need
  - 1=Shouldn't have/or Unnecessary

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## Product Integration

- **What does the SRM product being considered work with?**
  - With other products and storage types (DAS, SAN, NAS) – SAN mgmt., mgmt. consoles, provisioning, ILM
  - Application-specific Features
    - Customizing policies for applications
  - Database-specific Information
  - E-mail-specific Information
  - HOW DETAILED IS THE DATA COLLECTED – A GOTCHA

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## Standards Supported

- **This could include**
  - Storage formats
    - Block and file
  - Network protocol standards
    - FC, FCIP, iSCSI
  - Device management standards
    - SMI-S and any other SNIA sponsored initiatives
  - Programming standards
    - JAVA, SQL (support for database languages)

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## Technology Architecture Innovation

- **Basic product architecture**
  - Flat file vs. database
- **Monitoring/Collection**
  - Frequency and time of monitoring, schedule data collection
- **Performance Thresholds/Monitoring**
  - System level, network level, trends

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## Technology Architecture Innovation

- **Automation Tasks**
  - Extend quotas, capacity on demand, provision new storage, run custom scripts, send alerts/commands to other apps.
- **Charge Back Capabilities/Options**
- **Product Roadmap**
  - New features, product integration, e.g. convergence

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## Ease of Use

- **Sure, everyone says it's easy.**
- **Not so fast**
- **What's important to you for this?**
  - Wizards
  - Report templates
  - Automatic detection of devices
  - Fast set up
  - Command line interfaces
  - Easy scripting techniques

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## Product Scope

- **Product Scalability**
  - File systems, users supported, network ports
- **Predictive Analysis**
  - Network bottlenecks, disk capacity, e-mail threshold, application thresholds
- **Monitoring Elements**
  - User, file system, directory, folder, application, server, department, object size...
- **Report Types**
  - Usage, total space available, total volume capacity/used, historic reports, custom reports...

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## Corporate/Product Viability

- **Is the company rock solid?**
  - Startups require special scrutiny.
  - Funding, long-range support, ability to support...
- **Customer support programs**
  - How often is the product updated?
  - Onsite, phone, Web support

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## Corporate/Product Viability

- **Partnerships: Does it play with others?**
  - Applications, enterprise mgmt., OS, network vendors
- **Pricing Models**
  - By managed device, by user, by TB, by server, by application module
  - How easy is it to understand?

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## Service Management Integration

- **Key questions include:**
  - How are storage services supported or integrated with?
  - What automation can be built in to allow for thresholds to create actions for SLAs?
    - Applications, groups, business units?

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## Service Management Integration

- What cost analysis could be integrated to support services?
- What special functionality integrates into enterprise service management tools?
- Is there integration with IT or storage workflow and provisioning tools?

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## ILM Integration (TBD)

- **Key questions include:**
  - How will SRM monitoring weave ILM strategies?
  - How could SRM be used to set up data assessment and grading processes?
  - Will SRM play a strong role in the data migration from point A to point B on the network?
- **Vendor plans here remain fuzzy.**
  - But, if roadmaps suggest integration, it is something to consider.

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## 5 Gotchas/Questions to Consider

1. **Pricing: What's it going to cost me overall? TCO**
  - Check the fine print on maintenance and patches
2. **Reporting Detail: What's your ability to see...?**
  - Not consistent by storage system, network vendor, application
3. **Product Roadmap: Where's this going?**
  - You want to know the product will have legs

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## 5 Gotchas/Questions to Consider

4. **Product Integration: What will this talk to?**

- What's long term plan for ILM, Backup/restore, provisioning, SAN mgmt., automation.... Applications

5. **Active vs. Passive Management: What can it do?**

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## Red Herrings To Beware Of



- **Careful of standards support:**  
"We're supportive of SMI-S."
  - Find out what this really means at the vendor level
- **Careful of system/network support:**  
"We can do that."
  - Ask them to do a test deployment to prove it
- **Careful of references:**  
"All customers are happy."
  - Talk to other customers and ask about pitfalls

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## Red Herrings To Beware Of, II

- **Take ROI/TCO analysis for what it is...**
  - Great validation, but read fine print in analysis for true story
- **Careful of visions:**  
"We developed automated storage" and utility computing
  - OK, now prove it with features, customers and deployments

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## Additional RFP Tips

- **You could have a separate seminar on RFP writing**
- **Craft your RFP to address**
  - Your key questions/red herrings
  - Those features you rank as important
- **Make sure you offer detailed information about your requirements without tipping all your cards**
  - Give vendors evaluation criteria, but don't tell them your highest priorities or testing criteria

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## Additional RFP Tips, II

- **Don't forget the business case**
  - Both for upper mgmt. and vendors
- **Make the RFP a feedback loop**
  - Is it reasonable? Solicit their commitment to respond...

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## Additional RFP Tips, III

- **Ask for full disclosure on costs**
  - What's training cost?
  - How long will it take for the team to manage on regular basis?
  - How long is testing and deployment cycle?
  - What cost justification can the vendor offer up?
  - What's payback like?

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## Final Recommendations

- **Do your homework before you buy.**
- **Look for lots of third-party validation.**
- **Consider vendors with long-range integration goals.**
- **Buyer beware: Look for ways to validate vendor claims with real trial deployments.**
- **Consider the cost savings SRM will bring.**
  - This might change your budgetary expectations in favor of more feature-rich products.

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## Thank you. Questions?

- [jgruener@yankeegroup.com](mailto:jgruener@yankeegroup.com)
- **I will be at the Ask-the-Expert booth in the Exhibit Hall this afternoon (only today)**

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