

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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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

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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
- **I will be at the Ask-the-Expert booth in the Exhibit Hall this afternoon (only today)**
