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Aligning Technology to Business

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Engagement Summary | Storage Virtualization

DISCLAIMER

This is a summary of a specific engagement with its own set of requirements and client goals. The recommendations made and subsequent results were specific to that client and do not represent a global endorsement of the recommended solution nor a disapprobation of the solutions that were not recommended.

CLIENT SUMMARY

INDUSTRY

Financial

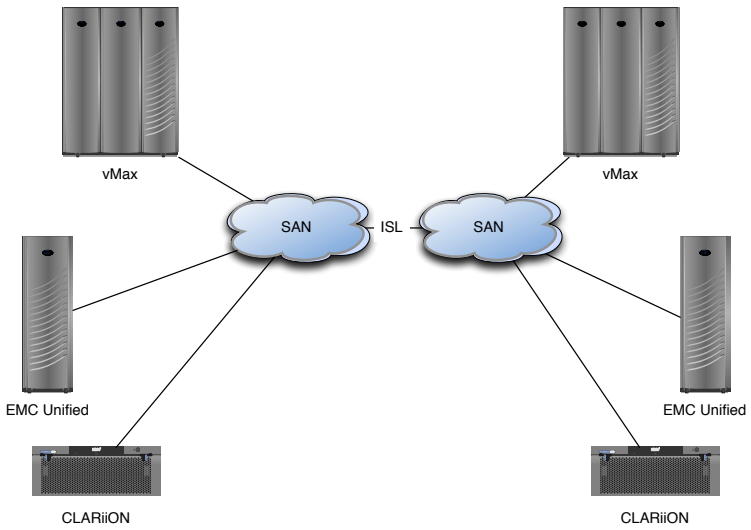
CLIENT OBJECTIVES

- Reduce maintenance costs for their storage environment
- Allow current assets to be used and life of assets extended
- Allow future storage hardware to be purchased as a commodity
- Allow for seamless data movement whether moved for performance or frame retirement
- Move towards performance based set of metrics versus traditional capacity metrics
- Provide a framework that simplifies definition and management of levels services for the storage environment
- Simplify automation and provide groundwork for Infrastructure as a Service (IaaS)

CURRENT STATE ARCHITECTURE

Client has a mix of predominantly EMC storage hardware and a Cisco core based storage area network.

SUMMARY OF CURRENT STATE



Simplified Logical Drawing

PHYSICAL CURRENT STATE SUMMARY

- Two datacenters
- Multiple EMC vMax arrays paired with equal configurations at each of the datacenters
- Multiple EMC Unified NS-XXX CLARiiON / CELERA arrays and CXXX arrays
- Primarily Cisco SAN fabric, 93XX core switches, interfaced directly with the storage hardware and via 7000 class converged switches from client side.

STORAGE ENVIRONMENT SOFTWARE

- EMC SRDF (both Synchronous and Asynchronous)
- EMC TimeFinder (both Snap and Clone)
- EMC Thin VP
- EMC FAST VP
- EMC Control Center
- EMC SPA
- EMC SMC
- EMC Unisphere for vMax
- Unisphere for CLARiiON
- Snap View
- Mirror View
- Fast for CLARiiON
- Thin Provisioning

PROJECT SUMMARY

VENDORS CONSIDERED

- EMC vPlex
- HDS VSP
- IBM SVC
- HP StoreVirtual / 3Par

PROJECT METHODOLOGY

- Business stakeholder interviews to collect non-functional requirements
- Technical stakeholder interview to collect functional requirements
- Facilitated creation of the Request For Proposal (RFP) questionnaire
- Facilitated creation of the initial technology / vendor list
- Facilitated scoring of the vendor RFP responses & first round vendor elimination
- Facilitated vendor presentations & second round vendor elimination
- Facilitated creation of the Proof of Concept (POC) testing criteria and conditions
- Facilitated POC execution & scoring
- Facilitated selection of the vendor finalist
- Negotiated purchase agreement and maintenance terms
- Provided purchase recommendation to project team, then senior level management

SUMMARY OF VENDOR ELIMINATION

- HP StoreVirtual / 3 Par was eliminated during the RFP process. When it was determined that their solution would only work whthin a homogeneous HP storage environment
- IBM was eliminated after vendor presentations due to following concerns: Scaling the product to the size needed for this client was going to be prohibitive from the number of nodes needed and from the number of SAN connections required for the solution. Beyond the scaling issues, IBM's initial quote was 40% higher than the other remaining vendors (HDS and EMC)

SUMMARY OF FINDINGS AND FINAL RECOMMENDATION

EMC VPLEX

PROS

- Introduction of virtual layer added less than 1 ms to response time (consistent with adding a switch hop)
- Provided client the ability to define levels of storage services
- Met needs to simplify data movement due to migration or performance on EMC specific hardware
- Allowed for continued use of clients current EMC storage infrastructure
- No learning curve for administrative tools, already used in house

CONS

- Did not allow for the retirement of any of the EMC array based software, therefor did not reduce annual maintenance associated with those applications (approximately $1.7 million / year)
- While touted as capable of heterogeneous storage hardware support, many of the advanced features were not available on anything other than the EMC hardware
- Due to the two points immediately above, did not meet client's requirement to commoditize storage hardware purchases in the future
- EMC, at the time, still required many disparate applications to monitor application specific performance, further issues with FAST VP, specific to thin provisioning reporting across their product line failed to meet requirement for performance based reporting

HDS VSP

PROS

- Provided an environment where the client could replace functionality found in EMC's TimeFinder, SRDF, FAST VP and Thin Provisioning across first, second and third tier storage arrays with VSP functionality. Meeting clients number one business goal of reducing, significantly, storage specific software maintenance
- Provided client ability to extend the useful life of their current EMC storage assets
- Provided client ability to purchase storage hardware as a commodity
- Provided the client the ability to migrate data seamlessly (after first installation) when needed due to application performance changes or storage frame retirement
- Provided the client the ability to define levels of storage services
- Provided the client the ability to, as part of their levels of service, define performance criteria and SLA's for each of those levels of service. Allowing the client to not only monitor for SLA compliance but also proactively, via automation, make the necessary changes
- Provided a clear technology path and support for current and near term future technologies necessary to present IaaS.

CONS

- New vendor for the client
- Concerns over local support resources
- New management tool set
- Concern on site replication specific to load balancing and latency associated with synchronous replication

RECOMMENDATION

IT Strategies Group recommended to the client that they proceed with the Hitachi Data Systems VSP solution.

While the EMC technology was very strong, it did not decrease the clients ongoing software maintenance burden, it actually increased costs (with the addition of the vPlex related software.) In addition, EMC's approach with vPlex seems to be geared towards increasing lock-in to their product line, which this client was specifically trying to avoid. While using EMC' new federated storage functionality in Enginuity would have allowed the client to move data between their vMax and CLARiiON tiers, it was specific to EMC hardware only and not considered a complete virtualized solution.

HDS' solution met all the clients requirements, was considerably easier to integrate other storage vendor's hardware into and provided the easiest path towards full automation for the client. Since it was a new vendor and new technology for the client, there were concerns about vendor support and learning new administrative tools. The concern over support were handled as part of the purchase agreement terms and conditions. The administration tool training issues were addressed through partially vendor funded training, also as part of the purchasing terms and conditions.

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