NML SAN Replacement 2018 Questions & Answers

Q - Is only the Production storage (Gridstore) in scope for this and we are not considering the DR storage?

A - Production storage only

Q - The 5 initial Hyper-V servers to be migrated are the existing servers outlined (Dell R730/R740) in the document?

A - The outlines Dell r730/r740 are the physical server nodes/hosts that hold the virtual machines that require migration

Q - These servers already have 10GbE interfaces and if so how many?

A - Yes 10gb Ethernet interfaces, all 10gb cards are Broadcom.  They have  4 ports per server node/host. We have 5 production server nodes/hosts for the production cluster network which is a total of 20 10GB Ethernet ports.  We also have a 2 node/host VDI management servers which also have 4 x 10gb Ethernet ports on each with 8 in total.

Q - There is a mention about not using deduplication as part of your storage capacity calculation – is that the same for all storage efficiencies?

A - Yes

Q - Your current used capacity is 35Tb – does this include any storage efficiencies, compression etc?

A - No

Q - How is storage presented to virtual machines (not hosts) such as SQL via iSCSI or as Virtual disks (VHD’s/VHDx’s)?

A - Hyper V – VHD and VHDX’s for each virtual disk drives

Q - Current connections are via iSCSI are options to utilise protocols such as SMB 3 OK to be considered?

A - Currently 10gb Ethernet direct is used, gridstore has software client on the nodes/hosts that connects to the hypervisor directly. However, iscsi and SMB3 are options

Q - Current Gridstore offers a “hyper converged” offering – is there any interest in considering that or are you looking to keep compute and storage separate?

A - We will be using the current switches and compute server nodes/hosts – however any storage solution that meets the specification, will be considered and scored as outlined

Q - Can we please ask if any performance metrics (server and Storage) have been taken against the current setup, Like Live optics, etc?

A - The Microsoft attachment appendix in the tender, has on one of the tabs the full read, write and IOPS per each virtual server live performance metrics results ran for 1week included

Q - This question is not related to the clarifications element, however…I read that Veeam was being utilised, is this the driving force behind the SAN requirement? We know that deploying Veeam over long retentions can somewhat escalate storage requirements.

A - No Veeam isn’t the driving point. The reason for the tender is that the contract for our current SAN comes to an end in September

Q - What connection method do you wish to include? Is this 10gb SFP+ or Base T?

A - Base-t Ethernet 10gb – we have already the 10gb ethernet network cards and Ethernet 10gb switches

Q - What warranty duration do you wish?             3 years? 5 years?

A - 3 years minimum with a option for 5 years

Q - What Warranty cover do you wish to include? 9x5, 24x7 or 4 hour on-site response?

A - 9-5

Q - Tender specification calls for the new SAN to be connected via 10Gbe iSCSI.  Is there a switching architecture already in place, or are 10Gbe switches required as part of the solution?

A - 10GB Ethernet network switches are already in place and any solution is required to be compatible with 10gb Ethernet standards.

Q - Tender specification calls for an increase in IOPS and performance.  Is there a target IOPS level

A - The included document at appendix C,   Microsoft Scanning Report NML, one of the tabs shows the read/write IOPS for each virtual machine so we would need this solution to be able to perform above this level

Q - In addition, is there a preference for delivery by an ‘All Flash’ solution?

A - No preference. We require a solution that meets the tender requirements and will be marked on the outlined criteria

Q - What support length are you looking for? 3 or 5 years?

A - 3 year is minimum, with an option for 5years

Q - What SLA? 4 hour on site? next business day?

A - Next business day for hardware parts is minimum, 9-5

Q - what are the current 10GB switches this SAN will be connecting to? vendor/model?

A - Dell N4064 – 10gb Ethernet ports and we have one switch for SAN and a separate Dell N4064 switch for LAN traffic

Q - are they 10GB SFP+ or 10GB BaseT?

A - We use the Ethernet 10gb base t ports

Q - do you have a preference on how you would like to configure the 50Tb of usable storage?

A - No, as long as it is compatible with the mentioned technology we have. Hyperv, Dell N4064 ethernet and 10gb server Ethernet network cards and meets above levels for performance that each server iops read/write levels are outlined as in the appendix document included.

Q - Do you have a top end budget figure that you can share? This will massively help decide upon the technology.

A - At the moment we are not releasing a budget, but we are looking for a very competitive solution

Q - How many SAN switches are in use and how many ports are free on each switch. NB We require 4 x 10Gb ports (2 on each switch) to connect the SAN

A - 1x Dell N4064 for LAN at least 20 x 10gb Ethernet ports are available and a separate Dell N4064 for the SAN network with at least 20 x 10gb Ethernet ports available

Q - What is the SAN switch port presentation. Is it 10Gb SFP+ or 10Gb copper

A - 10gb copper

Q - Section 4.8 item ix) in the supplied SAN Replacement Tender Specification references question 6.1, but this section does not exist. Please advise

A - Please ignore this it is a typo

Q - Should the cables/modules to connect the SAN to the switch be included in the costs

A - Yes all required cables should be included – each server does have 10gb Ethernet cards already

Q - Section 5.1 in the supplied SAN Replacement Tender Specification references install, configuration and testing of the network – please clarify as the Tender is for a SAN and not a network

A - Just testing of the storage solution proposed

Q - Section 5.2 in the supplied SAN Replacement Tender Specification references Support / Maintenance. Please advise the period of vendor support required e.g. 1,3 or 5 years and whether on-site for hardware issues is Next Business Day or 4-hours

A - 3 year minimum with a 5 year could be an option.  Next business day, 9-5

Q - would you confirm if you would consider hosting this within a 3rd Party Data Centre?

A - We are not ruling out any solution, however as you will see from the scoring criteria cost is a major factor here, so it would need to be very competitive

Q - The tender is very much hardware focused, would NML consider innovative and resilient cloud alternatives, such as Hybrid Cloud, which combines dedicated server nodes and shared NetApp Storage to provide a consumption based model to reduce the cost of ownership. This would not compromise NML’s control over data and virtualisation, nor IOPS performance detailed in Appendices 3.

A - NML will consider any solution that meets the set criteria, as you will see from the scoring criteria overall cost is a major factor

Q - Who currently provides the WAN?

A - M24seven

Q - Does NML utilise technologies like MPLS or SD-WAN?

A - MPLS

Q - What is the RPO/RTO of the current Veeam backup solution? What improvements would you require?

A - Veeam is currently set to backup at least once per day on all servers to disk and monthly tape backups. We also have continuous replications using veeam to a backup DR site. The DR hardware will not be replaced

This is for a SAN main storage hardware and we do not wish to replace or use  a different backup system or hardware.

Q - Hyper-V is the hypervisor of choice at present, would NML consider VMware?

A - No we are happy with Hyper-V

Q - We note a vast amount of NML data are .jpg files, how often do then need to be accessed?

A - It depends on the user, some files can go years before access, some each day

Q - With the current 20Tb of storage used, how much is used for archiving purposes?

A - None this is all main storage, we do have another archive server that will not be replaced here, that holds around 6tb of data

Q - Please can you provide information about available rack space and availability of PDU / UPS’?

A - Minimum of 12U rack space is available

Q - Please can you provide more information about replication methodology to DR site (asynchronous / synchronous) and impact on latency and/or acceptable risk of data loss in event of DR?

A - We currently use a dedicated dark fibre to a DR centre for continuous replication using Veeam – we do not want to change this as it isn’t in the current scope

Q - The performance metrics supplied only measure against the server environment.  Is there any information available on performance measured against the existing SAN?

A - We don’t have the SAN metrics so therefore would like the new solution to perform or be capable well beyond the needs of the servers

Q - What work has been undertaken to determine where any MS SQL performance issues may lie and whether deploying a ‘faster’ SAN will actually impact database and application performance?

A - Applications have had SQL maintenance plans configured and created and follow the best practice given by the application providers and configure recommended settings per application included dedicated hyperv drives for data and logs etc

Q - Is the 50TB capacity a year 1 requirement or is this after years 2 or 3?

A - After year 3

Q - What is the change rate of your data set?

A - We don’t have this rating

Q - Can you confirm if you’d prefer/need a block or file system?

A - No preference as long as all aspects of the solution are met

Q - Backup Data Centre with Dell R720/710 server’s virtualisation infrastructure and Dell EqualLogic PS4100E and 6000 models – is this in scope to be replaced?

A - No

Q - What version of Hyper – V are you on?

A - 2012 R2 looking to move to 2016 in the future

Q - You currently have separate switches for the SAN and LAN networks . Each network has a Dell N4064 via 10gb Ethernet - are these in scope?

A - We have these already and will be used – not replaced

Q - The separate switches for the SAN and LAN networks - each network has a Dell N4064 via 10gb Ethernet. Are these to be replaced?

A - No

Q - Veeam – What licensed version of Veeam do you have?

A - Enterprise

Q - What storage is Veeam currently saving the backup data to?

A - New Dell servers with attached storage

Q - Is Veeam used for replication?

A - Yes

Q - Can you expand on Virtual Servers environment? – e.g. Information on the type of application servers, why there are 18 file and print servers, are these all in a single location on the existing SAN or distributed across the various locations?

A - On central SAN and VDI used to access for the users

Q - Could you provide a map of which host your VM’s sit on and the current windows svr and SQL licensing for the same?

A - We don’t have a map, but we have 5 physical servers which the VM’s sit on. All SQL servers are licensed to sit on one physical server for SQL 2012 and we also have a SQL 2008 full license, we only use one though. These are in a failover cluster

Q - We understand that you are looking for the most economically advantage proposal, but are you able to provide any budgetary figures so our proposal remains competitive?

A - Sorry but we are not releasing the budget, but as you will see from the scoring criteria, cost is a key factor

Q - how would we access any clarifications submitted by other bidders?

A - All Q&As will be posted on the advert on contracts Finder on Wednesday 27th June

Q - What connectivity is available for the storage? (eg. SPF+, 10Gb BaseT)

A - 10gb base t Ethernet is available on current switches already purchased Dell n4064 – up to 20 ports available on a LAN switch and up to 20 ports available on a SAN switch

Q - What warranty terms are NML looking to be provided for the new storage?

A - 3 years minimum, 5 year options would be considered

Q - NML’s host servers are currently connected to the storage platform via 10Gb Ethernet (SAN switches). Is it anticipated that this existing network infrastructure will remain in place to connect the host servers to the new storage platform?

A – correct

Q - If so, can NML please supply details (quantity, make, model, firmware version) of the existing network SAN switches connecting the host servers to the storage, and also the physical Network Interface Cards installed in the host servers. This is so we can check compatibility with any solution we may propose. We appreciate the switches are Dell N4064 models, but please confirm the number of SAN switches, and firmware details etc. Any storage network diagrams that NML are able to produce detailing the current storage/SAN fabric/host server architecture would be helpful.

A - Two switches Dell N4064 one for LAN and one for SAN. Both firmware version 6.2.0.5

Q - Can NML please confirm the number of free 10GbE ports available on each of the existing SAN switches? It is likely that any new storage solution proposed will need to connect to the existing SAN switches in parallel with the existing storage solution, to facilitate migration of data.

A - Yes in parallel and minimum of 20 free ports in each switch for SAN and LAN

Q - Can NML please confirm what storage connectivity protocol is running between the host servers and the current storage platform – is this iSCSI, CIFS, NFS or a mixture?

A - The current hypergrid/gridstore uses an agent that is installed on each host and plgs directly into the hypervisor

Q - Can NML please confirm that the existing version of Hyper-V running on the host servers supports Storage Live Migration?

A – yes

Q - NML currently has five host servers in the production environment. Please can NML confirm the exact make and model of each one of the five production host servers?

A - We have 3 R720's, 1 R730 and 1 R740. All Dell

Q - Please can NML confirm that no additional physical host servers will be added to the production environment over the envisaged lifespan of the new storage system, or suggest how many additional physical host servers may be added over this time?

A - We will always have the same amount 5, each year we purchase one new host for the live cluster and the oldest host goes into the DR setup

Q - Can NML please confirm how much physical rack space and power is available within the existing server room? It is likely that a new storage system would need to be installed and operational in parallel with the existing solution, so we need to confirm what rack space and power are available for any proposed new system. We are assuming there is sufficient cooling capacity within the server room to support the addition of a new storage system in parallel with the existing system – please can NML confirm that cooling is not likely to be a problem during the migration phase?

A - We do have two cooling units within the server room and 12u of rack space minimum

Q - NML have requested an increase in storage performance to significantly improve the performance of the SQL databases, as well as a general performance increase across all servers. Any additional information or details NML are able to provide regarding current issues around performance would be very helpful.

A - We follow the recommendations from each application company for each SQL. EG drives for logs and data, SQL maintenance plans etc

Q - Does NML intend to continue to utilise Veeam Backup & Recovery software to replicate / backup data from the production environment to the Backup Data Centre, once the new production storage system has been deployed?

A – yes

Q - Does NML intend to continue to utilise the existing server, storage and SAN network infrastructure currently in place in the Backup Data Centre, once the new production storage system has been deployed?

A – yes

Q - Can NML please confirm the total number of IT users across all sites that will concurrently be accessing applications and data provisioned from the new storage system? Ideally split by total concurrent number of users accessing a) the SQL databases, b) the application servers, and c) the file/print servers?

A - We have 600 users. 200 are light users such as cleaners and guards for payslips only. 400 are general users. We have never had more than 250 on at any current time. These users do a mix of tasks.

Q - Does NML require a remote managed service provided by the successful IT Solutions Provider, to manage, maintain and support the new storage solution, or will these functions be performed by internal NML IT resource?

A - NML staff will cover all day to day requests and increasing server allowed spae on the SAN etc. However, a hardware and any SAN only support contract will be required for if any problems or issues

Q - HyperGrid / Gridstore has provided storage platforms in the past on an OPEX, or monthly rental basis. Is NML looking to purchase the new storage system as a one-off Capital Expenditure, or potentially lease the system over a period of time?

A - capital