

- There appears to be 2 Data Facilities located at Kew: Is an appliance proposed at both DC locations or should the site be treated as one with one Appliance?

The site should be treated as one with one appliance.

- There is no reference to application data within your sizing sheet? Can you confirm application count and size? (e.g. Exchange, SQL, Oracle etc...) and whether they are physical or virtual?

All data is specified within the sizing sheet. It is not possible to provide the granular detail requested.

- What Hyper-V Versions are in use?

Microsoft Hyper-V 2012R2

- Reference the non-dedupable data in your spreadsheet – Can you confirm what this data is? Are you proposing to send it to data de duplication storage?

It is JPEG images as specified on the spreadsheet. It will be backed up using the same method, but we expect de duplication and compression to be poor.

- How was the 240TB Appliance sized?

After a period of market engagement.

- Have National Archive made a decision on which Public Cloud? This will potentially impact on the technology and associated cost for the long term retention/archive of data into the cloud?

The potential solutions have been specified in the tender.

- Tape – Plans to keep existing tape until Cloud is defined? What Tape Libraries, generation of tape drive and how many drives? Requirements for legacy re stores? What backup software and version is currently deployed?

The existing configuration will remain in situ for a short period of time to enable restores. We currently use Veritas NetBackup 7.6.

- The cloud we use is our own private, UK based, cloud – would this be considered?

The solution must allow archiving to public cloud providers including Amazon Web Services and Microsoft Azure and all necessary licensing and hardware must be included.

- Would the local backup be hosted in your data centre and then replicated to our private cloud?

The solution must allow archiving to public cloud providers including Amazon Web Services and Microsoft Azure and all necessary licensing and hardware must be included.

- Would it be possible to know the location of your data centres to make sure we can connect 8 x 10GbE optical ports as required.

TNA will provide required connectivity between data centres, both are located on-site.

- The Live Hyper V VMS states 155 clients on 12 hosts. Can you confirm that this is 155 OS? If so are these work stations or servers as this will affect licensing prices?

There is a mixture of workstation and server operating systems

Operating Systems	Count
Server	140
Workstation	15
Grand Total	155

- Would the backup of the VMS need to be granular?

Yes

- Are you looking for dual systems with replication between Data Centre1 and Data Centre2 to provide access following loss of site?

We are looking for a service for backup as specified. We are not looking to provide replication for availability.

- How far apart are the 2 DCs?

Both DC's are located on-site, connected by 10Gbp/s fibre.

- The embedded spreadsheet has retention figures, however there is no mention about performance – What is the desired Recovery Time Objective for each of the systems

We have recovery time objectives for each of our services allowing us to prioritise recovery.

For some of our most critical services the recovery time objective is 24 hours. As we have specified all data as being held in a secondary data centre on-site we do not anticipate any issues recovering within these timescales.

	Days
EDRMS	1
Email	1
Intranet	1

- What is the desired backup window for each of the systems mention in the spreadsheet?

Backups are to be performed outside of normal operational hours 10pm-6am

- What connectivity is available to Public Cloud to enable archiving?

We have a 1Gbp/s WAN link.

- Do you need to have backups encrypted (onsite/in cloud)?

Data located on site may not be encrypted. Data in the Cloud must be encrypted.

- Do the Physical Servers have access to the shares on the File Storage or would we need to provision proxy/gateway systems to protect the File Storage?

The solutions specified within the tender include appliances which can back-up our systems directly.

- What applications are in use on the physical servers and what level of granularity would be needed for data recovery (Server/Filesystem/File/DB/Record/etc)?

We have a range of applications in use on physical servers including Exchange and SQL Server. We must be able to recover individual files from a physical server.

- Is the cost of Cloud infrastructure/services out of scope for this tender?

The solution must allow archiving to public cloud providers including Amazon Web Services and Microsoft Azure and all necessary licensing and hardware must be included.

Cloud storage is out of scope.

- Is all the equipment located in the same DC or spread across multiple locations?

The proposed architecture is included in the tender.

- What do you currently use for backup and do you need to migrate existing data to the new solution?

We currently use Veritas NetBackup 7.6.

We anticipate this to be a completely new installation with no migration of data.

- Can TNA advise if they wish to retain their existing backup software (potentially EMC Networker, Symantec NetBackup, Asigra Cloud Backup, etc.) backup servers and client software and just replace the backend storage appliance and provide a path to backup storage in 'the cloud'. Or, do TNA wish to replace their complete backup / restore infrastructure, including backup software, backup appliances and storage?

As specified 'The requirement is for a backup solution including a local backup appliance and all software required.'

We currently use Veritas NetBackup 7.6. Current software licensing does not allow for functionality required in the proposed solution and therefore new software licenses will need to be included for Veritas Netbackup if this software is selected by the supplier.

We can accommodate virtual or physical servers required to host the backup software within our existing infrastructure.

A backup appliance must be included as part of the tender.

Cloud storage does not need to be included. However, the solution must allow archiving to public cloud providers including Amazon Web Services and Microsoft Azure and all necessary licensing and hardware must be included.

- If the answer is to replace the existing software, please advise what connectivity and bandwidth is available from the clients to the backup appliance(s).

10Gbp/s

- Can TNA also advise what SLA's they are working to. How long is the backup window and what is the restore SLA and is there a priority list for restores?

We have recovery time objectives for each of our services allowing us to prioritise recovery.

For some of our most critical services the recovery time objective is 24 hours. As we have specified all data as being held in a secondary data centre on-site we do not anticipate any issues recovering within these timescales.

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- Can you let us know what software products you are currently using to back up the current estate. If possible please provide the vendor and version of the SW used?

Veritas NetBackup 7.6

- Are you planning to stick with the current back up SW products? If not do you have a preferred backup SW solution?

We have narrowed our SW and Hardware selection to EMC Data Domain / Networker, Veritas NetBackup and Asigra.

- Is it possible to arrange a meeting or call with the IT team to ensure we put forward a solution that is fully tailored to your requirements?

At the moment, we request that all questions are submitted in writing.

- The statement "The solution must have as a minimum 8 x 10GbE optical ports to interface to our trusted and untrusted domains". Please can you clarify if the 8 ports required are in each appliance at each site, or is the requirement split and only 4 ports are required per site?

There is only one appliance in the specified solutions.

- Do you currently have data in AWS and or Azure?

Yes

- With regards to Cloud archive, would the retention be an extension of backup retention or run alongside?

All data stored in the cloud will also be stored on-site. There is a maximum of 12 months retention on all data.

- Could you please provide me with an idea of the types of data to be backed up. It does not need to be a detailed level. The following would be a good start:

1. Are there any SQL databases and if so, a rough indication of size

SQL databases are backed up to the file storage specified within the tender.

2. Are there any other databases

MySQL

3. What percentage of files are normal office type file

A breakdown of file types cannot be provided. Data which can be deduped and compressed is listed within the spreadsheet provided. We store a large amount of images which are clearly listed.

4. Are there any video files

A breakdown of file types cannot be provided. We do not expect the quantity of video files to be significant.

- Preparing the project requires more details of current backup solution, retention policy and amount of the data being backed up. Would you be able to provide the above?

Information relating to the retention policy and amount of the data being backed is included in the published tender documentation.

- Would you be willing to utilise a fully cloud based solution?

Following an unsuccessful open tender in 2016, we have subsequently reviewed the backup solution market and have identified the three solutions specified in the ITT. We will not consider alternative solutions at this stage.

- Does the data have to be backed up into Azure or AWS, or can it be backed up into another UK based company?

The solution must allow archiving to public cloud providers including Amazon Web Services and Microsoft Azure and all necessary licensing and hardware must be included. Cloud storage is out of scope.

- TNA has supplied a spreadsheet that contains some technical details of backups requirements but we would like to understand the following details in order to provide a full assessment:-

- Data types across the estate i.e. VM images, ISO's, Video files, text files, Operating system types etc.

All data is specified within the sizing sheet. It is not possible to provide the granular detail requested.

- The data life cycle(s) i.e. how long will data of this type from this server will need to be kept?

All data is specified within the sizing sheet. It is not possible to provide the granular detail requested.

- Off site requirements for different data and different data types i.e. disaster recovery and resilience type scenarios

We are looking for a service for backup as specified. We are not looking to provide replication for availability. The solution must allow archiving to public cloud providers including Amazon Web Services and Microsoft Azure and all necessary licensing and hardware must be included. Cloud storage is out of scope.

- RTO & RPO objectives (Recovery point in time objective and recovery time objective) i.e. recover data from how long ago from where in what expected time?

We have recovery time objectives for each of our services allowing us to prioritise recovery. For some of our most critical services the recovery time objective is 24 hours. As we have specified all data as being held in a secondary data centre on-site we do not anticipate any issues recovering within these timescales.

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The recovery point objective is 1 day.

- Clarification of the distinction between DR and a resilient, multi-copy backup solution (mentioned in objective bulletpoint 3).

We are looking for a service for backup as specified. We are not looking to provide replication for availability.

- Clarification of expectation around archive recovery from the Cloud?

Cloud storage is out of scope.

- Details of VM guest Operating Systems

We have a range of VM guest Operating Systems – Not all will need to be backed up. Please specify any limitations in your tender.

64-bit edition of Windows 10
64-bit edition of Windows 7
64-bit edition of Windows Server 2008 R2 Enterprise

64-bit edition of Windows Server 2008 R2 Standard
64-bit edition of Windows Server 2012 Standard
Other Linux (32 bit)
Red Hat Enterprise Linux 6 (64 bit)
Red Hat Enterprise Linux 7 (64 bit)
Ubuntu Linux 14.04 (64 bit)
Windows 10
Windows 7
Windows Server 2008 Standard 32-Bit
Windows Server 2012 R2 Standard

- Confirmation on how are *-fs file presentations mounted.

Our NTFS shares are CIF shares on the EMC Unity 400F appliance.

- Is there a requirement for a Managed Service wrapper or ongoing support as part of this tender? If so, is does remote support meet TNA requirements?

Support will be required. Remote support can be facilitated. However, if issues cannot be resolved remotely then there is still an obligation to resolve issues on-premise.

- Is support required just during 9x5 business hours or 24x7x365?

Both options considered. 9x5 business hours will be acceptable.

- We were unable to establish what or if any plans/current architecture were already in place to address the end of month Full backups images with extended retention periods. Will these backup images be taped off to an existing tape library (onsite) or will they be replicated to existing cloud storage?

Apart from legacy restores until the end of the current retention periods (12 months) we will cease to use tape backup.

Data stored up to 12 months will all be located on the backup appliance disk storage. We believe this to be sufficient due to deduplication and compression.

A small subset of critical data will also be sent to the cloud. However, the data will still be stored on premise in another building negating the need in most circumstances for any cloud retrieval.

- You note that you have selected vendors for the hardware appliances and newer or more capable models will be considered. Can you confirm if that is more capable models of those vendors, or from the marketplace. For instance, would you consider units with the same and or more functionality from another but more specialist data storage organising with a track record of long term archival storage for large datasets?

We will only consider at this stage new or more capable models of the vendors specified. We have already undertaken an open tender without specifying solutions, and that was unsuccessful. The vendors specified were identified following a period of market testing.