Background document for sourcing a replacement SAN

Storage Area Network (SAN) Replacement

Nottingham Trent University

Introduction

NTU is currently undertaking market research to help form the overall strategy for managing unstructured data. We are trying to ascertain whether cloud hosting of data can support our requirements and this exercise is aiming to inform interested parties of our anticipated requirements, giving the opportunity for an open dialogue prior to any procurement exercise. We are also interested in outline costs for cloud services to support our analysis. Please be aware that at this stage we are not looking to purchase; as such we will not be formally assessing proposals, and nothing given or provided at this stage will be evaluated as part of any future procurement process.

Nottingham Trent University

NTU deliver a wide ranging number of undergraduate and postgraduate programmes with a student population of approximately 25,000. The University has a number of corporate systems supporting this activity and a sizeable amount of data storage.

NTU Current SAN Situation

The University currently operates an on-premise SAN. This service has reached capacity and we are considering the approach we will take to replace this.

The University use the current SAN for file store data, sql server and VM ware. The data size for the university is growing at approximately 20% per annum with the current data profile looking as follows:

VM Ware	68 TBs
SQL Cluster	13 TBs
File store	75 TBs

The University SAN is located in the main University data centre with high availability back up located in a data centre on another campus.

Objectives

The project looks to support the following business objectives:

- To store University data in an efficient and cost effective manner.
- To utilise Cloud based solutions where possible.
- To ensure speedy fail over and recovery of data when required (high availability).
- To provide scalable data storage that grows in line with University data requirements.

The solution will need to:

- Provide an equivalent or better service for data storage and retrieval.
- Increase the ease of managing data.
- Provide a value for money solution comparable with current on-premise costs.
- Deliver a flexible data solution that can grow and contract to support the changing HE environment.
- Function using our existing Cisco DC networking.

Requirements Overview

The University is exploring two possible cloud models. These are:

1. A full cloud based solution with the SAN and high availability back up located in a cloud service, in different locations.

2. A partial cloud solution with the SAN on premise but backed up in a high availability cloud service.

When exploring these options, the following high level questions have been identified:

For option 1 and 2 described above

- What methodology do you use to transfer and retrieve information stored in the cloud?
- How do you manage VMware in the cloud. For example, we use our virtual machines as the mid-tier for our corporate systems, with the databases for these solutions held on other servers on campus. How would you be able to implement this in a cloud solution?
- What size of internet connection is required to implement a cloud solution?
- What methodology would be used to move our current data assets into the cloud and how long would this take?
- What tools do you provide for performance monitoring and administering adjustments to the service?
- What approach do you take when backing up the data. Where do you locate your backup service in relation to the main SAN storage?
- How long would it take to retrieve a whole backup?
- What levels of security protection do you apply to the cloud service?
- How do you protect the data stored? What approach do you take to ongoing threats to data?
- How have you implemented your solution elsewhere in the Higher Education sector?
- What methodology/technical solutions to you use to measure performance of the SAN and how do you make this available to your customers?

For option 2 described above

- In this option, the main service would be on-premise with the back up in the cloud. How would you structure this service?
- What methods do you use to replicate the data into the cloud?
- How frequently is data replicated to the cloud backup?
- What level of data loss may occur if the on-premise service was to fail?
- What is your disaster recovery model for this approach?
- What are the timescales for recovering data?

Statutory Requirements

Nottingham Trent have a number of statutory requirements when storing data off campus. Please only offer services that can comply with the following:

- All data stored off University premises must ideally be located in the UK, but storage within the EEA is also accepted.
- Any data storage service must be able to comply with UK data management legislation, namely the Data Protection Act 1998 and the European General Data Protection Regulation (GDPR) when it comes into effect in May 2018.

Soft Market Testing Questions

Please complete the following questions (this can be submitted as a separate document for ease of compiling) and ensure these have been emailed to sharanjit.rathbone@ntu.ac.uk by Monday 14th May 2018, if you are interested in partaking in our market testing exercise. If you have any questions or queries please don't hesitate to contact Sharanjit Rathbone on the email provided above.

1. Name, address and size of organisation (including contact details for the main respondent)

2. Brief organisational overview, including which industries you operate in (500 words or less)

3. Your experience providing cloud based SANs and backups.

4. How your solution could meet the requirements and questions in the Requirements Overview detailed above.

5. Details of any hardware and infrastructure requirements to implement your service.

6. Details of sizing and pricing structures for your service.

7. Details of implementation approaches and timelines.

8. Confirm how your proposed service complies with the Statutory Requirements listed in section above.

9. Examples of previous implementations, ideally within the Higher Education sector.