

**Cloud Storage Services**

Request for Proposal

March 4, 2017

Presented by:

**NYU Hospitals Center**

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# Purpose

NYU Hospitals Center (NYUHC) is soliciting this RFP for vendors to provide a flexible and extensible mechanism for archival storage services that can meet the demanding nature of a dynamic healthcare organization. This solution will be a central component of NYUHC’s infrastructure.

NYUHC is seeking a supplier with:

* Healthcare experience
* Willing to manage and supply an enterprise storage solution
* Proven track record in regulated environments with operational efficiency
* Monitoring and reporting capabilities
* Guaranteed dedicated, high quality resources
* Quick turnaround times for requests
* Competitive pricing
* Bring value to NYUHC

# Milestone Calendar

The following calendar of events is based on planned NYUHC activities and anticipated supplier delivery capabilities. It is presented for illustrative purposes only. These milestones will be reviewed as necessary at the time a contract is awarded to a Supplier.

|  |  |  |
| --- | --- | --- |
| **Milestone** | **Date** | **Time** |
| RFP Release Date | 4/4/2017 | 5:00 PM EST |
| Intent to Bid | 4/11/2017 | 5:00 PM EST |
| Supplier questions due | 4/18/2017 | 5:00 PM EST |
| NYUHC answers to suppliers due | 4/21/2017 | 5:00 PM EST |
| Supplier demos (on-site) | 4/28/2017 | 5:00 PM EST |
| Proposals due | 5/5/2017 | 5:00 PM EST |

Please also refer to section 17 for further details on the Implementation Timeline and section 18 for Evaluation Criteria.

# Required RFP Response

Suppliers are required to submit their Proposal in the specified electronic format. Supplier will submit their entire RFP response and all completed forms electronically via e-mail to NYUHC with supplier’s information and responses provided in the appropriate places therein. The required electronic applications formats are Microsoft Word and Microsoft Excel. Any supporting graphic or presentation-based slides may be submitted in a separate PowerPoint file. PDF format is **not acceptable** for any submitted text or graphics.

# Proposal Due Date, Delivery Instructions and Communication

All Proposals are due by, May 5, 2017 no later than 5:00 P.M. EST.

Send your complete electronic response via email to [ITSourcing@nyumc.org](mailto:ITSourcing@nyumc.org).

Bidders Note: All questions regarding interpretation or specifications must be submitted in writing to [ITSourcing@nyumc.org](mailto:ITSourcing@nyumc.org) only. Under no circumstances shall supplier contact any employee of NYUHC. Any dialogue initiated by the bidder not addressed to contacts above will result in an immediate disqualification. Discussions on other business matters not related to this RFP are permitted.

# Proprietary Information, Non-Disclosure

Supplier shall have no rights in this document or the information contained therein and shall not duplicate or disseminate said document or information outside the supplier's organization without the prior written consent of NYUHC.

# Costs Incurred

All costs incurred in the preparation of the Proposal shall be borne by supplier. By submitting a Proposal, supplier agrees that the rejection of any proposal in whole or in part will not render NYUHC liable for incurred costs and damages.

# NYUHC Reserves Right to Refuse Any and All Bids

Nothing in this RFP shall create any binding obligation upon NYUHC. Moreover, NYUHC, at its sole discretion, reserves the right to reject any and all bids as well as the right not to award any contract under this bid process. NYUHC reserves the right to award portion of this bid. NYUHC reserves the right to adjust the evaluation criteria after finalizing the scope and pricing requirements after the supplier demo meeting. The winning bidder has the option to repurchase the existing equipment and will have to provide credit on the new purchase. All bids should be governed by NYUHC standard Policy and Procedure and Terms and Conditions.

# Effective Period of Prices

All pricing Proposals by supplier will remain fixed and firm through May 31st, 2022.

# Background

## Introduction

NYUHC is looking at implementing a flexible and extensible mechanism for archival storage services. It is anticipated that this capability will be a cloud-based model, which would integrate with our existing infrastructure and service management processes, including the tiered storage model in place today.



Preference will be given to those solutions that are based on industry standard technologies however novel methods of providing this capability would also be looked on favorably.

## Current Environment

The current infrastructure is based on a number of enterprise solutions, including products from HP, Cisco, Microsoft, Red Hat, VMware, Oracle, EMC and IBM. Other vendor solutions are also in place, including application-specific systems for both clinical and non-clinical areas of the organization.

Storage services are provided through a combination of SAN and NAS solutions. SAN connectivity is delivered via 8Gb/s or 16Gb/s Fibre Channel to either EMC XtremIO or HPE 3PAR storage arrays. For those systems that require CIFS or NFS services, EMC Isilon arrays are utilized. Different versions of SMB and NFS are in use depending on the application requirements.

The majority of the existing server infrastructure is provided through blade-based systems that are running the VMware ESX hypervisor. Dedicated servers are deployed only when meeting specific hardware, performance or support requirements, including vendor-supplied appliances. Supported operating systems are Red Hat Enterprise Linux v6 and higher and Windows Server 2008 and higher (additional operating systems are supported on an exception basis).

Network connectivity is provided through a converged environment based on Cisco Nexus switches, with wide-area network services connecting hospitals and ambulatory sites to our datacenters.

Client access is through Windows 7, Windows 10 and macOS end points. iOS and Android mobile devices are also used.

## Objectives

### Implementation Guidelines

The aim of the service should be to allow the seamless migration of data to a tertiary storage tier with the ability for end users to retrieve that data without assistance from IT staff. Throughout the lifecycle of the data, security must be maintained and full auditing must be available for tracking who has requested access to what data and when. In the first instance, NYUHC is looking at a service that can support approximately 1PB (one petabyte) of data, however that may change depending on the capabilities of the proposed solution.

Detailed metrics on service usage should be captured at all stages so that service owners, infrastructure teams and end users can obtain accurate information about what resources are being used on an infrastructure, service, line of business and location basis. Full reporting and analytic capabilities should also be available to provide end users, service owners, infrastructure teams and senior management information on the overall performance of the entire environment.

It is expected that the solution will be implemented in a phased approach, starting with a pilot to familiarize technical and applications teams with the solution and allow validation of business requirements. Additional features would be incorporated in subsequent phases.

### Integration

NYUHC requires that any solution integrates with the existing EMC Isilon storage environment, allowing the movement of data between on-premise systems and any external storage in a seamless fashion. This can be achieved through native integration or utilizing a gateway.

Additional storage systems from other vendors may be added in the future.

### Private vs Public Access

Initially the goal is to present these capabilities to internal users only (i.e. access to data will only be through existing NYUHC systems). Subsequent phases may include offering access externally.

See also section 9.3.5 below for additional requirements.

### Capacity Requirements

As outlined in 9.3.1 above, NYUHC is expecting the initial capacity required would be approximately 1PB with a growth rate of 5-10% per month. The estimated retrieval rate of data would be about 500-1,000 GB per month. (Note that these are average figures.)

### Security

As a healthcare provider, security of our data is of the utmost importance. Any solution must be able to adhere to NYUHC’s policies and procedures specifying access controls, encryption of data at rest and in flight, regulatory compliance (such as HIPPA, PCI DSS, FISMA, FERPA), data retention needs and other regulations as they arise.

Any partner must be able to show their ability to meet these requirements, especially in areas such as:

* Authentication, authorization and federation capabilities
* Data security (compliance with HIPAA, PCI DSS, FISMA, FERPA, etc.)
* Data safety (physical and logical segregation of data)
* Auditing, monitoring and alerting
* Contractual arrangements (ability to sign confidentiality agreements, BAA’s, etc.)

Where data resides in a third-party facility, it is important that a clear plan exists for data migration and repatriation should that need arise to relocate that data for whatever reason. Capabilities to copy or replicate data between other third party storage providers are also desired.

# Technical Requirements

For each section, provide an overview of how your solution addresses the specific area and briefly respond to the questions, especially in regards to meeting the goals outlined in section 9 above, especially 9.3, *et seq*.

## Architecture

1. Please provide a description and architectural overview of the solution. Indicate where third-party solutions are required to provide additional capabilities.
2. What is the technology being used? How do you utilize existing standards in system, storage and networking technologies?
3. Describe in detail the lifecycle and workflow for the migration, retrieval and removal of data.
4. Briefly describe your near and longer term product vision and roadmap.
5. Please describe in detail data redundancy features
6. Does the solution support a multi-tenancy model which would allow the creation of services which are logically and administratively segregated from one another?
7. The solution must support access from multiple sites and locations. Please describe how the solution scales across multiple facilities.
8. How does the solution provide high availability and disaster recovery? Please provide a comprehensive description of how your solution can deliver continuous availability.
9. What is your licensing model used by your solution (e.g. by capacity, user, site, etc.)?
10. Please describe all enterprise monitoring solutions that can integrate with your product.
11. What is the process and additional cost of expanding the system as requirements grow?
12. Does your solution provide an API and, if so, what features/capabilities are supported?

## Infrastructure

1. Please specify all networking, hardware and software requirements for the proposed solution.
2. How would major release updates/upgrades be handled?
3. Provide the frequency of software updates and the method of delivery.
4. What is the preferred method of integrating with current storage technologies, especially those outlined in section 9.2 above? Please provide detailed technical requirements for enabling such connectivity.
5. Are data stores backward/forward compatible with the source and destination systems? Specifically, as technology changes, what impact would upgrades have on previous versions?
6. What level of redundancy is supported in your solution, and is failover an automatic or manual process? Please describe the failover process in detail. (See also 10.1.h.)
7. How is segregation between different groups of users implemented within your solution? (See also 10.1.f.)
8. What are the client requirements for your solution (if any)? Please list the minimum and recommended specifications.

## Operations

1. Provide an overview of the service definition process, including how it can manage multiple versions, dependency checking, etc.
2. What workflow and automation features are available in your product? How customizable are these features?
3. The solution must have a single management interface that can support all administrative functions. Monitoring and alerting capabilities such as user defined thresholds, sending alerts to other management systems, failure notification, etc. This should include proactive monitoring and alerting capabilities on capacity, connectivity and performance issues. This single administrative tool should be easy to administer and simplify the existing operational procedures.
4. Default and customized reports should be made available for usage, performance, capacity and environmental factors.
5. Access to the management interface should be secured with strong authentication and authorization controls in place, including directory integration, role-based access controls and multi-factor authentication. (See also section 10.5 below.)
6. NYUHC requires 24x7, one (1) hour response for the solution, and on-site support is required within four (4) hours for any equipment installed into NYUHC datacenters.
7. The vendor is expected to provide the option of receiving automated alerts in order to insure proactive detection of potential failures and impact to NYUHC.
8. The storage vendor commits to training four (4) full time NYUHC employees in all aspects of configuring and managing the solution in order to bring them to a proficient operational level. Full documentation should be provided, including support documentation and advanced administration and troubleshooting, etc. guides.
9. How can other systems integrate into the solution to provide additional information or features? What interfaces are supported?
10. What metrics are captured by default and what third-party systems, if any, would be needed to provide additional details?
11. Describe the reporting capabilities of the system.

## Networking

1. Describe in detail the networking capabilities that are either supported and/or required to implement the solution, including management, routing, load balancing, data optimization, firewall configuration, etc.
2. Please provide recommendations for connectivity based on expected data volumes (see section 9.3.4 above).

## Security

1. Given the importance of such a system, can you describe in detail how your system is hardened against malicious attacks?
2. Please describe in detail how data is encrypted both in flight and at rest. What algorithms and key management solutions are supported?
3. What capabilities exist to ensure that data is permanently deleted from your solution?
4. What rights/capabilities/responsibilities do system administrators have? Are there multiple levels of administrator privileges?
5. Does the solution interact with directory services like Active Directory, Kerberos, LDAP or RADIUS? If so, list level of integration and functionality.
6. Does the solution integrate with other Enterprise single sign-on solutions such as Oracle OAM/IAM?
7. For management, are multiple-factor solutions supported? If so, list the vendors and products that have been successfully deployed.
8. The system must support the ability to generate security alerts based on pre-defined criteria.
9. Please describe in detail the log messages generated by the solution. Does your solution integrate with SIEM solutions such as Loglogic? Do these need to be on-premise or off-premise?
10. Provide detailed information around how to meet regulatory compliance demands.

# Description of Company

**Supplier Answer**: Indicate your compliance with each requirement and document any exception

The designated supplier must have provided storage services and solutions to the public for a minimum of three (3) years. The supplier will offer a comprehensive package for storage services as specified in this RFP to all NYUHC facilities.

Please provide:

1. The company’s full name, address, main telephone and appropriate contact information including e-mail address.
2. A brief historical perspective on your company (years in the business, growth via mergers and acquisitions, key industry innovations)
3. What are your company values?
4. Describe your corporate culture. Explain how you differentiate yourself from your competition.
5. Describe the full range of services your company offers and the corresponding rates. Include all services that will be available and all expenses that we would incur under this agreement.
6. List office locations and specific responsibilities of each area.
7. Please provide an overview of your company’s growth over the past five years.
8. Provide audited financial statement for the two fiscal years immediately prior to this one.
9. What percentage of your business is in healthcare?

# Regulatory and Compliance

How does your solution help the organization meet the following regulatory and industry standards? (Identify specific examples and include other regulatory entities your product adheres to and/or have experience with):

* HIPAA (Health Insurance Portability and Accountability Act)
* HITECH (Health Information Technology for Economic & Clinical Health Act)
* CMS (Centers for Medicare and Medicaid Services)
* CCHIT (Certification Commission for Healthcare Information Technology)
* State specific requirements and mandates
* FISMA
* FERPA

# Past Performance and References

**Supplier Answer**: Provide at least three (3) references of past deployments of storage solutions in a healthcare setting of similar size and scope of NYUHC.

For each reference please include the following:

* Healthcare organization name, contact name, title, address and telephone number.
* Describe the relationship and services provided.
* If you cannot provide at least one healthcare reference of a similar size and scope of NYUHC, please explain and indicate the largest installation you have performed.
* Provide current and past account information, of similar size and configuration. Include:
* A current, long-term customer
* A current customer implemented in the past 18 months
* A former customer terminated within the past 18 months and reasoning for termination other than consolidation

Failure to provide suitable references to NYUHC will result in the Supplier’s bid being rejected without further consideration.

# Professional Services and Customer Support

**Supplier Answer**: All questions need to be answered in this RFP document. Indicate your compliance with each requirement and document any exception.

1. Describe your professional services practice.
2. Describe your experience in providing these types of services. Highlight company strengths as it relates to the request from NYUHC.
3. What personnel will be involved in delivering services both direct and indirect?
4. Briefly describe your experience in implementing similar solutions. Indicate how you provided support to the company to implement such solutions and outline any road blocks you encountered and how they were resolved.
5. Identify the key owner in your organization who is ultimately responsible for ensuring the success of this implementation.
6. Describe your proposed implementation methodology, including:
   1. Timeline for implementation, key milestones and dates
   2. Provide a detailed management plan and outline of the proposed workflow and any requirements to deliver services
   3. Outline the required NYUHC team members required for a comprehensive deployment and approach for engagement.
   4. What types of standard or *ad hoc* reports do you provide detailing project status?
   5. What service guarantees do you offer?
   6. What penalties have you incurred in the past year?

# Training

**Supplier Answer**: All questions need to be answered in this RFP document. Indicate your compliance with each requirement and document any exception.

* Describe technical and administrative training.
* Describe reporting/database training.
* Describe end user training materials that have been used successfully.

# Pricing

Please provide pricing information in the enclosed Attachment. All hardware, support and services should also be included for a five (5) year agreement.

Please see the enclosed Attachment A to provide your pricing information.

# Implementation Timeline

## Milestones

Implementation will be over multiple phases:

* Phase 1: Vendor selection / Proof of technology
* Phase 2: Implementation and acceptance testing
* Phase 3: Data migration

Note that the “Data migration” phase will be the beginning of the movement of data and will continue onwards.

## Proof of Technology

### Goal

The goal of the proof of concept (or pilot) is to identify potential vendor partner candidates for selection and initial deployment in the first half of 2017. The pilot will help NYUHC confirm responses to questions in the sections above and provide NYUHC architects, executives and planners an opportunity to have a deeper understanding of the selected solution.

The detailed pilot configuration should address the following use cases based on RFP responses:

* Show the full lifecycle of the solution (data migration, retrieval and deletion)
* Management
* Show workflow capabilities, including automation features
* System integration
* Reporting and metrics

Please provide a recommended pilot setup for the above scenarios, indicating what would be required for any supporting infrastructure.

### Participation in Pilot Phase

In order for your response to this RFP to be given further consideration, you must state in writing as part of your response that:

1. Your willingness to participate and support a pilot phase project at your own cost.
2. You understand that pilot use-case scenarios will be selected based on responses to this RFP.
3. Your ability to provide a proposal for the pilot phase project within two (2) weeks after notification to continue in the vendor selection process.
4. You acknowledge that you may not be the sole vendor to participate in the pilot phase project.
5. You acknowledge that responding to this RFP and participation in the pilot phase project does not serve as an indication that NYUHC will take further procurement action in this matter.

# Evaluation Criteria

NYUHC plans to evaluate the supplier’s response based on the following criteria:

1. Functional Requirements
2. Technology Requirements
3. Price Competitiveness
4. Adherence to NYUHC Terms and Conditions
5. Regulatory Compliance
6. Product and Customer Support
7. References
8. Company Values and Business Visibility
9. Demo/Presentation