

# THE PORT AUTHORITY OF NY & NJ

PROCUREMENT DEPARTMENT  
4 WORLD TRADE CENTER  
150 GREENWICH STREET, 21<sup>ST</sup> FL.  
NEW YORK, NY 10007

12/1/2017

## ADDENDUM # 1

To prospective Proposer(s) on **RFI # 51418 for PROVISION OF DATACENTER RELOCATION MARKETPLACE INFORMATION**

Originally due on 12/4/2017, no later than 2:00PM, Eastern Time

Due back on 12/18/2017, no later than 2:00PM, Eastern Time

### I. CHANGES/MODIFICATIONS

**The following changes/modifications are hereby made to the solicitation documents:**

- Bid due date has been rescheduled from December 4, 2017 to December 18, 2017 at 2:00 PM.
- See the following paragraphs for additional information regarding this solicitation.
- Responses to questions – See Part II Proposer’s Questions and Answers.

As stated in Section 2 of the RFI – Overview / Request, the Authority is in the preliminary stages of this Data Center relocation effort. The Authority is seeking to understand what choices are commercially available, what decisions need to be made, and ultimately what information needs to be provided in the event it determines to issue a solicitation related to such services.

The Authority believes that many questions posed during the question and answer period for this RFI are more suitable to be responded to or addressed in a solicitation, if one is undertaken. The following general responses are intended to provide such information to questions of this nature as the Authority deems appropriate.

1. The Authority’s data center is approximately 6,000 sq. ft. and consists of approximately 50 racks of equipment, has redundant power with NEMA L6-30 circuits and goes through approximately 210,000 KWH in power per month. However, this is inclusive of console and environmental (i.e. AC / Cooling etc.) equipment, etc. The Authority currently does not know what percentage of these overall figures is directly related to systems and therefore cannot provide information on what would need to be replicated.

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The Authority has 24 x 7 facility workforce and presently all applications are available 24/7 with no stoppage and with no applications turned off overnight. The Authority is looking for respondents to advise with what factors we should consider in developing effective estimates for a future solution.

2. The Authority has not provided growth figures in this RFI. We are aware that flexibility needs to be considered and are interested in scalability options, e.g. how we should account for growth, or even scaling back in case of moving to a cloud or virtualization, etc. We are seeking responses indicating what factors we should consider with respect to growth, scaling, etc. and how you respond to requests for changes relating to these matters. The Authority is interested in such factors as - Are there minimums, are there time constraints, what are the costing implications of changes, etc.
3. The Authority has not determined if it prefers simple co-location of servers, full managed services, or a hybrid solution. Therefore, we currently do not have a data center location preference. We are looking for the appropriate geographic diversity that maximizes access and minimizes risk. If Authority staff are required to access the data center, then location and travel considerations are paramount. In cases of complete managed services, location matters less. Rather than homing in or eliminating locations now, please describe your various offerings with associated pros and cons.
4. ***IBM Mainframe.*** It is currently anticipated that the mainframe will be sunset by the time a solicitation and contracting for this effort is in place. ***Therefore, all references to needing to move and/or relocate the mainframe are hereby deleted and replaced with the following request:***
  - a. Please describe any options you may have to run mainframe workload on your equipment.
5. A series of questions revolved around time frames for issuance of the RFP, Port Authority contact points, go live dates, timeframes for moving out of the existing facility as well as the length of potential agreements. The Authority is seeking this information from the marketplace and these timeframes will be determined as part of the information received from this RFI. We prefer to get a sense from the marketplace as to the length of typical migration planning cycles, transition and migration execution as well as contracting term. Please include in your response typical timeframe ranges associated with various approaches and information about the factors that can affect those timeframes.
6. Many questions asked about seeing copies of detailed information such as, but not limited to: *CON Ops, capacity and traffic matrices, KPIs, retention policies, memory allocations, doing site walkthroughs. seeing actual power bills, reviewing architecture diagrams detailing network, infrastructure, security, storage and other services that comprise the current infrastructure design.* We understand that this type of information may be required in a solicitation for services related to this RFI, if one is undertaken. Please include in your response what information we should include as part of potential

solicitations or make available in connection therewith so we present our request effectively.

## II. PROPOSER'S QUESTIONS AND ANSWERS

The following information is available in response to questions submitted by prospective Proposers. The responses should not be deemed to answer all questions, which have been submitted by Proposers to the Port Authority. It addresses only those questions, which the Port Authority has deemed to require additional information and/or clarification. The fact that information has not been supplied with respect to any questions asked by Proposers does not mean or imply, nor should it be deemed to mean or imply, any meaning, construction, or implication with respect to the terms.

The Port Authority makes no representations, warranties or guarantees that the information contained herein is accurate, complete or timely or that such information accurately represents the conditions that would be encountered during the performance of the Contract. The furnishing of such information by the Port Authority shall not create or be deemed to create any obligation or liability upon it for any reason whatsoever and each Proposer, by submitting its Proposal, expressly agrees that it has not relied upon the foregoing information, and that it shall not hold the Port Authority liable or responsible therefor in any manner whatsoever. Accordingly, nothing contained herein and no representation, statement or promise, of the Port Authority, its Commissioners, officers, agents, representatives, or employees, oral or in writing, shall impair or limit the effect of the warranties of the Proposer required by this Proposal or Contract and the Proposer agrees that it shall not hold the Port Authority liable or responsible therefor in any manner whatsoever.

The Questions and Answers numbering sequence will be continued sequentially in any forthcoming Addenda that may be issued.

<b><i>Question #1</i></b>	What are the main reasons the Port Authority is seeking this information?
<b><i>Answer #1</i></b>	The Port Authority is seeking information related to options and solutions for: (i) diversifying its datacenter locations; (ii) maintaining its aging infrastructure; and (iii) choosing providers for maintenance of its datacenter.
<b><i>Question #2</i></b>	In case of additional questions, can the Port Authority designate a person of contact to be available during response preparation?
<b><i>Answer #2</i></b>	<b><i>All communication shall be directed to the buyer specified on the cover page of this RFI.</i></b>

<b>Question #3</b>	Would there be any limitations or exclusions for companies whose parent company is not American?
<b>Answer #3</b>	We don't anticipate there to be any limitations.
<b>Question #4</b>	Attachment B - #3 speaks to 470 virtual servers that host applications and 95 physical hosts which run 1,000 Virtual Machines. Is the virtual server count 1000 or 1470?
<b>Answer #4</b>	Total virtual server count is 1000 of which 470 servers are production servers, and the remaining 530 servers are development/test servers.
<b>Question #5</b>	Attachment B - #4 Linux and Solaris environments. Can you supply a server count for these?
<b>Answer #5</b>	125 servers.
<b>Question #6</b>	Attachment B - #8 SAN – Backup storage details a. What is the type and model of the SAN environment? b. Are tape drives or silos utilized? i. If yes, what is the type, model, and count?
<b>Answer #6</b>	a. IBM DS5300 SAN Storage (one 1818-53A storage controller, eight 1818-G1A expansion units, and two 2498-B40 fiber channel switches). b. Yes. i. IBM TS3500 Tape Library (one 3584-L22 base unit, one 3584-D22 expansion frame, one 3584-D23 expansion frame), and 24 IBM 3592-E07 tape drives.
<b>Question #7</b>	a. Does the Port Authority maintain a current CMDB of all in-scope server, storage, network and applications? i. If yes, please provide a rough accuracy level of the CMDB.
<b>Answer #7</b>	a. Yes. i. The accuracy level is 85%.
<b>Question #8</b>	Does the Port Authority have any auto-discovery tools deployed in the environment?
<b>Answer #8</b>	Yes.

<b>Question #9</b>	Will new hardware, such as network switches and routers and possibly swing/seed hardware need to be factored into the ROM pricing, or will that be addressed outside of this RFI scope?
<b>Answer #9</b>	It depends on the solution. The response should make it clear whether hardware is included.
<b>Question #10</b>	Who manages the in-scope IT infrastructure at the data center (Port Authority IT staff, outsourced, etc.)?
<b>Answer #10</b>	It is a mix between Port Authority staff and selected 3 <sup>rd</sup> party vendors.
<b>Question #11</b>	Is this going to be a complete “lift & shift” or are you planning on any type of “Tech Refresh”?
<b>Answer #11</b>	This effort is anticipated to be a lift and shift. Please detail pros and cons as applicable in your response to Section 4, Part H of the RFI entitled Information for a Solicitation.
<b>Question #12</b>	Could you provide your current power draw at the PDU level?
<b>Answer #12</b>	The four PDUs power draw are as follow: PDU 1 = 33 KW PDU 2 = 25 KW PDU 3 = 38 KW PDU 4 = 31 KW
<b>Question #13</b>	a. Can you please provide additional clarification as to what “Tier vs. workload” is defined to mean? b. What scope of work does this apply to?
<b>Answer #13</b>	a. Tier means all applications that make up one ecosystem, and workload means one application at a time. b. This refers to the migration approach.
<b>Question #14</b>	Please provide the following additional technical scope information:  a. What is the number of IBM mainframes to be migrated? b. What is the number of network devices to be migrated and the manufacturer and model if possible? c. What is the number of SAN devices to be migrated?
<b>Answer #14</b>	a. See Section I, Paragraph 4 above with regard to IBM Mainframe. b. Approximately 200 Cisco network devices. c. Seven SANs with 800 TB total storage.

<b>Question #15</b>	Does the Port Authority anticipate structuring the final contract as a large single-award or as a multi-award vehicle with task order options?
<b>Answer #15</b>	Please detail pros and cons as applicable in your response to Section 4, Part H of the RFI entitled Information for a Solicitation.
<b>Question #16</b>	a. Is this datacenter acting as disaster recovery for the other datacenter? b. Is this datacenter also acting as primary for any of the applications?
<b>Answer #16</b>	This datacenter is acting as both a primary and disaster recovery site.
<b>Question #17</b>	Is the Port Authority only looking for a hosting solution or is services (operating system, database, middleware, storage, network etc.) support also required?
<b>Answer #17</b>	The Authority has not made a determination. Please include all relevant factors and decision points as part of your response to Section 4, Part E of the RFI entitled Cost Estimate (Rough Order of Magnitude) and Section 4, Part H of the RFI entitled Information for a Solicitation.
<b>Question #18</b>	a. Is Azure connectivity available from the other datacenter? b. Can data be replicated to public cloud for disaster recovery purposes?
<b>Answer #18</b>	a. Yes, Azure connectivity is available from both datacenters. b. Data replication to cloud is under consideration.
<b>Question #19</b>	a. Is data being replicated at a SAN level or application level? b. Can we get the details of replication technologies in place? c. Will the current Port Authority team be responsible for redirecting the replication to the new datacenter?
<b>Answer #19</b>	a. The data replication is SAN level. b. Replication technologies are built into the SAN management software. c. Yes.
<b>Question #20</b>	a. What are the Security requirements/ certifications (e.g. SOX, PCI, ISO 27001, ISO 9000, HIPAA) that need to be complied with in the target hosting datacenter or cloud region?
<b>Answer #20</b>	a. At a minimum, the requirements are anticipated to include PCI, HIPAA, NIST800, and SSAE 16 SOC 2. Please detail all available security certifications in your response.

<b>Question #21</b>	Can you provide details of any non X86 environment, if any other than Mainframe, which is mentioned in the document?
<b>Answer #21</b>	There are no others.
<b>Question #22</b>	a. Has any cloud assignment been carried out and identified for hybrid cloud? b. What is your current footprint in Azure Cloud?
<b>Answer #22</b>	a. No. b. Current Azure Cloud footprint is limited.
<b>Question #23</b>	Will the Port Authority continue to retain the financial responsibility for non-x86 and mainframe systems?
<b>Answer #23</b>	Yes.
<b>Question #24</b>	Is there a tiered classification for storage requirements?
<b>Answer #24</b>	No.
<b>Question #25</b>	Will the Port Authority require a backup data center along with their primary data center?
<b>Answer #25</b>	No.
<b>Question #26</b>	What type of cooling containment system is in place with the 6,000 sq. ft. teleport Data Center? (Hot Aisle Containment, Cold Aisle Containment, Chimney Containment system, in row cooling).
<b>Answer #26</b>	Hot Aisle and Cold Aisle Containment.
<b>Question #27</b>	Does the Port Authority own the UPS(s), PDU(s), RPP(s), cabinets that are in place today in their current environment?
<b>Answer #27</b>	Yes.
<b>Question #28</b>	Will the Port Authority require right of first offer space to expand?

<b><i>Answer #28</i></b>	The Authority is seeking information to understand the options and costs associated with this decision.
<b><i>Question #29</i></b>	a. Will the Port Authority be providing their own cabinets? i. If so what are the cabinet dimensions? (Cabinet Cut sheet preferred).
<b><i>Answer #29</i></b>	No.
<b><i>Question #30</i></b>	Will the Port Authority be providing their own PDUs (Power Distribution units) in their cabinets?
<b><i>Answer #30</i></b>	No.
<b><i>Question #31</i></b>	How many carriers does the Port Authority want to connect to?
<b><i>Answer #31</i></b>	Two to three.
<b><i>Question #32</i></b>	Does the Port Authority require DIA?
<b><i>Answer #32</i></b>	No.
<b><i>Question #33</i></b>	Does the Port Authority require a remote hands package?
<b><i>Answer #33</i></b>	Yes.
<b><i>Question #34</i></b>	Will the Port Authority be doing their own structured cabling or would they like us to refer a partner for this internal cabling?
<b><i>Answer #34</i></b>	The Authority is seeking information to understand the options and costs associated with this decision.
<b><i>Question #35</i></b>	Is the Port Authority looking to reach the cloud?
<b><i>Answer #35</i></b>	Yes.
<b><i>Question #36</i></b>	a. What portion of the existing datacenter is planned for migration into the cloud?



	<ul style="list-style-type: none"> <li>i. Of this portion, which portion is going into a private and which into a public cloud?</li> <li>b. What networking infrastructure is planned in the new datacenter?</li> </ul>
<b>Answer #36</b>	<p>It is currently anticipated to be:</p> <ul style="list-style-type: none"> <li>a. 35%. <ul style="list-style-type: none"> <li>i. All public.</li> </ul> </li> <li>b. IOS networking infrastructure.</li> </ul>
<b>Question #37</b>	<ul style="list-style-type: none"> <li>a. In case of new equipment/software planned to be used in the new datacenter, what are the Port Authority's preferred vendors? <ul style="list-style-type: none"> <li>i. Is the new equipment list available?</li> </ul> </li> <li>b. Would the Port Authority purchase the new equipment or would the provider purchase the new equipment?</li> </ul>
<b>Answer #37</b>	Please provide details regarding the pros and cons of all arrangements in your response.
<b>Question #38</b>	Would the Port Authority be open to new datacenter design extensions, such as having full-automation of the new datacenter storage (Software Defined Storage - SDS), applications, and networking domains (Software Defined Network - SDN)?
<b>Answer #38</b>	Yes. Please detail the proposed solution in your response.
<b>Question #39</b>	<ul style="list-style-type: none"> <li>a. Does the Port Authority have any plans, not only to migrate, but to upgrade HW and SW? <ul style="list-style-type: none"> <li>i. When will these upgrades and migrations take place?</li> <li>ii. Which HW systems will be affected?</li> <li>iii. Which SW systems will be affected?</li> </ul> </li> </ul>
<b>Answer #39</b>	The Authority is seeking information to understand the options and costs associated with this decision.
<b>Question #40</b>	<ul style="list-style-type: none"> <li>a. Regarding IBM HW/SW, what contract/agreement documentation with IBM is in place?</li> <li>b. Would IBM allow the migration service provider to forklift IBM systems to the new datacenter?</li> </ul>
<b>Answer #40</b>	See Section I, Paragraph 4 above with regard to IBM mainframe.
<b>Question #41</b>	<ul style="list-style-type: none"> <li>a. Regarding Sun/Oracle-Sparc HW/SW, what contract/agreement documentation with Sun/Oracle is in place?</li> </ul>

	b. Would Sun/Oracle allow the migration service provider to forklift Sun/Oracle systems to the new datacenter?
<b>Answer #41</b>	Please provide all relevant concerns or options in response.
<b>Question #42</b>	Upon existing datacenter migration completion, will the old datacenter be phased out or kept in use (e.g., as a disaster recovery backup site)?
<b>Answer #42</b>	It is currently anticipated that the old datacenter will be phased out.
<b>Question #43</b>	Are you going to forklift your IBM mainframe equipment to the new datacenter?
<b>Answer #43</b>	See Section I, Paragraph 4 above with regard to IBM mainframe.
<b>Question #44</b>	What applications are cloud-ready?
<b>Answer #44</b>	About 30% are cloud-ready.
<b>Question #45</b>	What is your DNS solutions strategy?
<b>Answer #45</b>	The Port Authority has multiple DNS servers spread over both data centers.
<b>Question #46</b>	a. Do the current Port Authority IT security policies and governance allow proprietary data and applications to reside on an off-premise third party cloud service?
<b>Answer #46</b>	a. Yes.
<b>Question #47</b>	Does the Port Authority have current or proposed benchmarks in place for performance/latency (both network and applications), uptime, and disaster recovery (failover)?
<b>Answer #47</b>	We are seeking information regarding industry standards. Please provide details for all relevant areas of interest.

<b><i>Question #48</i></b>	How important is privacy to the Port Authority if subscription to a cloud-based service was chosen as a single solution or hybrid solution?
<b><i>Answer #48</i></b>	Very important.
<b><i>Question #49</i></b>	a. Does the Port Authority plan to re-engineer its Mainframe environment? i. If so, can the Port Authority share any specific details/architecture/plans?
<b><i>Answer #49</i></b>	See Section I, Paragraph 4 with regard to IBM mainframe.
<b><i>Question #50</i></b>	Is any BCDR space or other office space in use at the Teleport?
<b><i>Answer #50</i></b>	Yes.
<b><i>Question #51</i></b>	Are there any known reasons why the existing physical servers cannot be virtualized?
<b><i>Answer #51</i></b>	Yes, based on application and business requirements.
<b><i>Question #52</i></b>	a. Do the physical servers make use of the shared SAN or do they use internal storage? i. If internal storage is used, what is the average utilization and disk type?
<b><i>Answer #52</i></b>	The shared SAN is used.
<b><i>Question #53</i></b>	What version of VMware is running?
<b><i>Answer #53</i></b>	ESX v5 .x.
<b><i>Question #54</i></b>	Can you provide hardware details related to the Linux and Solaris servers?
<b><i>Answer #54</i></b>	IBM and Oracle/SUN servers.

<b>Question #55</b>	<ul style="list-style-type: none"> <li>a. For each type of infrastructure (physical, virtual, Linux, Solaris, z series), what method of replication is in use for disaster recovery?</li> <li>b. What is currently providing automated failover and tailback for disaster recovery for those platforms?</li> </ul>
<b>Answer #55</b>	<ul style="list-style-type: none"> <li>a. Disaster recovery is through backup tapes.</li> <li>b. Backup tapes.</li> </ul>
<b>Question #56</b>	How are applications and infrastructure currently segmented network-wise (VLAN, flat network, VXLAN)?
<b>Answer #56</b>	VLAN.
<b>Question #57</b>	<ul style="list-style-type: none"> <li>a. What type of hardware is the SAN?</li> <li>b. What type of disks is in use?</li> <li>c. What is the current in use storage of the 2600TB provisioned?</li> <li>d. What are the average IOPs?</li> <li>e. How many clusters/units are these 25 SAN servers broken into?</li> </ul>
<b>Answer #57</b>	<ul style="list-style-type: none"> <li>a. IBM hardware for SAN.</li> <li>b. IBM hardware for disks.</li> <li>c. Approximately 1500TB.</li> <li>d. 15,000 IOPs.</li> <li>e. 15 clusters.</li> </ul>
<b>Question #58</b>	<ul style="list-style-type: none"> <li>a. What method of backups currently exists today? <ul style="list-style-type: none"> <li>i. Can you describe its hardware/software?</li> </ul> </li> </ul>
<b>Answer #58</b>	<ul style="list-style-type: none"> <li>a. Backups to disk and copy to tapes. <ul style="list-style-type: none"> <li>i. IBM hardware/tape library. Backup software is FDR/Upstream.</li> </ul> </li> </ul>
<b>Question #59</b>	<ul style="list-style-type: none"> <li>a. What is the amount of connectivity (i.e. size of pipe) maintained to Office365?</li> <li>b. What are your other connectivity requirements (MPLS tie in, point-to-point to specific locations)? <ul style="list-style-type: none"> <li>i. For point-to-point, which address and what are your internet connectivity capacity requirements?</li> </ul> </li> </ul>
<b>Answer #59</b>	<ul style="list-style-type: none"> <li>a. 1 GB.</li> <li>b. 1 GB capacity. <ul style="list-style-type: none"> <li>i. 1 GB scalable to 10 GB.</li> </ul> </li> </ul>

<b><i>Question #60</i></b>	a. Do you currently own your own public IP space and AS #? i. If so, how many blocks?
<b><i>Answer #60</i></b>	a. Yes. i. The Authority acquired the Private Class B IP address for its network.
<b><i>Question #61</i></b>	a. Do you speak BGP to existing providers? i. If so how many blocks do you advertise? b. Do you require redundant connectivity to 2 separate BGP networks?
<b><i>Answer #61</i></b>	a. Yes. i. The Authority acquired the Private Class B IP address for its network. b. Yes.
<b><i>Question #62</i></b>	Is it possible to provide direct/private connectivity to the existing environment?
<b><i>Answer #62</i></b>	Yes.
<b><i>Question #63</i></b>	Please identify your redundancy requirements for power and cooling (e.g. N+1)?
<b><i>Answer #63</i></b>	N+1.
<b><i>Question #64</i></b>	As part of the eventual selection for the project, do you anticipate selecting a single firm or team that can provide both the relocation services and the data center physical space, or is awarding two separate contracts acceptable to the Port Authority?
<b><i>Answer #64</i></b>	Please detail pros and cons as applicable.

This communication should be initialed by you and annexed to your Proposal upon submission.

In case any Proposer fails to conform to these instructions, its Proposal will nevertheless be construed as though this communication had been so physically annexed and initialed.

THE PORT AUTHORITY OF NY & NJ

Stacey Willner  
Manager - IT Procurements  
Procurement Department

PROPOSER'S FIRM NAME: \_\_\_\_\_

INITIALED: \_\_\_\_\_

DATE: \_\_\_\_\_

QUESTIONS CONCERNING THIS ADDENDUM MAY BE ADDRESSED TO  
RAYMOND CABRERA, WHO CAN BE REACHED AT 212-435-5651 or at  
racabrera@panynj.gov.