Procurement of Cost-effective Long-term Data Storage

1.0 INTRODUCTION AND BACKGROUND
Florida LambdaRail, headquartered in Tallahassee, Florida’s capital city, is an independent regional optical network owned and operated on behalf of partner institutions and affiliates. Utilizing next generation network technologies, protocols and services, FLR facilitates collaboration and academic, scientific, educational, and clinical application development through high-speed communications.

On September 14, 2015, Florida LambdaRail, LLC (FLR), Florida’s Research and Education Network, announced the completion of a 100 Gigabits-per-second (Gbps) upgrade to the 1,540-mile core backbone of the FLR network. Traffic on the FLR backbone routinely spikes at 40 Gbps, underscoring the need for this high-speed instrument that enables FLR’s partners and affiliates to share real-time, data-intensive information with each other on a statewide, regional, national and global basis. The sum of all traffic carried by FLR in 2014 totaled nearly 8,000 Petabytes (a Petabyte is 1,000 Terabytes or 1,000,000 Gigabytes).

On November 18, 2015, FLR implemented a Regional Science DMZ. A Science DMZ is defined as a friction free network architecture that is purposely designed to support high performance computing and intensive science applications using different methodologies when compared to the typical enterprise network. A highly optimized end-to-end path utilizing Science DMZs increases the efficiency of data transmission.

Florida’s public and private Universities are home to talented scientists, high-end computing facilities and massive data storage systems. Florida LambdaRail and the Sunshine State Education & Research Computing Alliance (SSERCA) brings together these geographically distributed organizations and resources in such a way that their collective impact is far greater than the sum of their individual parts. The needs, requirements, and expectations of scientists and researchers has increased the need for special-purpose, end-to-end networks such as Florida LambdaRail to support the bandwidth and performance intensive applications, experiments, and data transfers that are necessary for research intensive science and high performance computing (HPC).

Various FLR Partner Institutions and Affiliates as well as SSERCA Members and Affiliates have focused upon “On-premise” storage solutions for high-performance computing and data analytics and are now pursuing a solution that can deliver cost-effective long-term data storage with low performance requirements for input and output. The solution can range from on-site, to a concentrated deployment at a few sites to serve the FLR Partner Institutions and Affiliates and SSERCA Members and Affiliates across the State of Florida, to cloud-based solutions that offer long-term (Five-ten year) research data retention, preservation with low-bandwidth access and retrieval requirements.
2.0 TECHNICAL OVERVIEW.
The successful responder(s) will offer solution(s) that provide cost-effective storage for data that needs to be stored and accessed with no emphasis on high-performance input-output, but emphasis on predictable cost and stability for long term preservation. The intent of this ITN is to provide researchers centralized storage that is competitive in price with commodity consumer storage, but allow for greater stability and data security.

2.1 REQUIREMENTS.
1. The expected lifetime of the storage solution is a minimum of 5 years.
2. Customers are researchers who need to be able to buy storage at the rate not to exceed $25 per TB per year at the beginning of a 5-year period and then incur no extra cost associated with data transfer in or out.
3. The not-to-exceed price point of $25 per TB per year is crucial.
4. Cost of on premise solutions:
   a. The cost of $25 per TB per year is defined to include acquisition of all hardware and hardware warranty on a parts replacement program for 5 years of the expected life of the equipment.
   b. The expected level of support is replacement of parts shipped to the operator of the equipment.
   c. All cost should be included in the initial acquisition cost, with no annual payments thereafter.
   d. The cost does not include the cost of operation provided by the institution or organization owning and operating the equipment for FLR Partner Institutions and Affiliates and SSERCA Members and Affiliates.
5. Cost of off-premise solutions:
   a. If the service is provided off-premise as a cloud service, the cost must include everything that is paid to the service provider and/or to any of their third party contractors/suppliers.
   b. Payment schedule can be negotiated.
6. The storage must present data in the form of a POSIX compliant file system.
7. The storage must have the ability to be mounted on selected high-performance computing clusters and servers to allow data transfer from fast storage to the cost-effective storage. The protocol is NFS v4.
8. The storage must have the ability to be mounted on user workstations. The protocol is CIFS. Because of the fact that performance is not critical, it is acceptable that this functionality is implemented through an intermediate server, e.g. samba server mounts the cost effective storage via NFS and exports it to workstations as CIFS.
9. The usability of the storage and how it integrates into the workflow of the researchers is of crucial importance. Innovative approaches are strongly encouraged.

2.2 VALUABLE FEATURES
The proposed solutions will be evaluated in addition to the above basic requirements on the following features.
1. Hierarchical storage management from some primary storage systems to the cost effective storage. There are many options. This topic is open for negotiation.
2. The NFS and CIFS access to the storage system is primary. Support for a RESTful interface is valuable.

2.3 MULTIPLE SOLUTIONS
It is acceptable and encouraged for respondents to propose multiple solutions balancing among cost, quality, and other technical features.

2.4 EXPECTED CAPACITY
1. The initial installation will consist of 1 to 2 PB of capacity per institution with an expressed interest of adoption from at least 7 institutions.
2. Expectations for initial utilization and growth are projected to be: 2,000 users in year one; 3,000 users year two; and 4,000 users year three.
3. The configuration and architecture of the system is open for negotiation and can range from
   a. equipment installed at each site,
   b. equipment at several sites serving multiple institutions,
   c. equipment at a single site serving all institutions, to
   d. cloud-based off-premise service provider serving all institutions.

3.0 ITN SUBMISSION.
All responses must be submitted electronically via the FLR website: (http://www.flrnet.org/?page_id=10797). Submissions by any other means than this website will not be considered.

4.0 ITN DELIVERY.
ITNs must be delivered and available at the address, date and time specified unless the ITN specifically states otherwise. ITN responses which for any reason are not available at this location at the prescribed time and date will not be considered. It is the respondent’s responsibility to assure that his/her ITN is delivered on the correct date and time and at the specified location. If the ITN specifications specifically allow submission by email, fax, the date and time printed on the copy of the ITN received by the Requestor will be the official date and time of the ITN's receipt. Timely delivery of the ITN itself to the specified location is required. Offers by telephone are not acceptable under any circumstances.

5.0 ITN CORRESPONDENCE AND AMENDMENTS.
All correspondence and amendments to this ITN solicitation will be in writing and issued by the Requestor. Correspondence will be issued electronically via e-mail only. It is the responsibility of responders to make certain that their e-mail address has been sent to ITN@flrnet.org. Responders are advised that all amendments will be posted on the FLR web site. You may access this web site by going to www.flrnet.org. Please refer to the ITN #FLRCLDS2016 contained in the in the upper left hand corner of this web site.
It is strongly recommended that respondents visit this site daily during the ITN process to make certain that all addenda (if required) have been received.

6.0 OBJECTIVE.
FLR & SSERCA desire to obtain the best price offer for 1TB of low-in-out IOPs data storage at a price not to exceed $25 per TB per year, with expected life of the solution of five years with additional renewals to ten years and beyond.

A "short list" of companies that will be joined in further and final negotiations with the Requestor will be developed from this initial response. Only representatives of the selected companies who are authorized to negotiate and make agreements shall be involved in negotiations.

7.0 DEFINITIONS.
Requestor: Florida LambdaRail, LLC.
Respondent/Responder/Offeror: Any entity submitting a written and electronic response to the ITN.
Awardee(s): Any entity(ies) awarded one or more purchase order(s)/contract(s) pursuant to this ITN.
FLR – Florida LambdaRail, LLC, a 501c3, limited liability, not-for-profit corporation (www.flrnet.org).
SSERCA – Sunshine State Education and Research Computing Alliance, a consortium of high performance computing organizations in the public and private universities in the state of Florida (www.sserca.org).
ITN – Invitation to Negotiate.
Gbps – Gigabits per second.
DMZ – network demilitarized zone.
HPC – High Performance Computing.
TB – Terabyte.
PB – Petabyte.
POSIX - Portable Operating System Interface.
NFS – Network File System.
CIFS – Common Internet File System.
RESTful - Representational State Transfer.
Sole Point of Contact - The Procurement Officer or designee to whom Respondents shall address any questions regarding the solicitation or award process. The sole point of contact shall be the arbitrator of any dispute concerning performance of the Contract.
8.0 SOLE POINT OF CONTACT.

Lance Taylor  
Florida LambdaRail, LLC  
1607 Village Square Blvd, Suite 4  
Tallahassee, FL 32308  
(850) 385-1250 voice  
(850) 385-0379 fax  
ITN@flrnet.org

9.0 SOLICITATION FORMAT.
FLR has elected to use the Invitation to Negotiate (ITN) process for this solicitation. The ITN is not an Invitation to Bid (ITB) or Request for Proposal (RFP). Respondents are encouraged to understand the difference between these procedures. The ITN is a more flexible procurement process designed for the acquisition (in this instance sale) of specialty goods and services such as technology products. The process has two steps in which FLR will review all responsive proposals and develop a "short list" of the offers, which seem to best meet the requirements of the Requestor. Once the "short list" of offerors/respondents has been developed a series of negotiations between designated respondent and the FLR-SSERCA Evaluation Committee may commence. Negotiations offer an opportunity for the selected respondents to discuss their offers with the FLR-SSERCA Evaluation Committee. As with the RFP, respondents are compared to each other on technical merit, quality of service and support, as well as to best price offer. The goal of this process is for FLR & SSERCA to identify the optimal outcome or the solution that best meets the needs of the FLR Partner Institutions and Affiliates as well as SSERCA Members and Affiliates.

10.0 EVALUATION PROCESS.
The joint FLR-SSERCA Evaluation & Negotiation Committee will evaluate and provide a consensus opinion of all initial responses. Up to three responses with the best responsiveness and best price offer will be asked to participate in a final negotiation of the best price offer. After all negotiations are complete, the FLR-SSERCA Evaluation & Negotiation Committee will award the sale to the offeror/respondent whose negotiated response best meets the needs of the Requestor.

Requestor reserves the right to reject any or all Proposals submitted. The Requestor also reserves the right to make multiple awards.

11.0 POSTING OF ITN SHORT LIST AND FINAL AWARD.
The consensus opinion for a recommended Short List of storage solution Respondents will be posted for review by interested parties at www.flrnet.org.

Final award decisions will remain posted for a period of seventy-two (72) hours.

12.0 EMPLOYMENT OF ALIENS STATEMENT.
The employment of unauthorized aliens by any respondent is considered a violation of Section 274A (e) of the Immigration and Nationality Act. If the respondent knowingly employs unauthorized aliens, such violation shall be cause for unilateral cancellation of any and all purchase order/contracts resulting from this solicitation.

13.0 SPECIAL ACCOMMODATIONS.
Any person requiring a special accommodation, because of a disability, should call 850-385-1250 least 3 workdays prior to any activity in conjunction with this solicitation.

14.0 COMPLIANCE WITH LAWS AND REGULATIONS.
In performing their obligations under this Agreement, the parties shall abide by all laws, statutes, ordinances, rules and regulations pertaining to or regulating the performance required by this Agreement. Any violation of such laws, statutes, ordinances, rules or regulations shall constitute a material breach of this Agreement and shall entitle the non-violating party to terminate this Agreement immediately upon delivery of written notice of termination to the violating party, provided that a written notice of violation and a reasonable opportunity to cure has been first given.

15.0 MODIFICATIONS.
The Respondent’s response to the ITN solicitation may only be modified in the form of a written notice received prior to the time and date set for opening. Telegraphic/telephonic or facsimile modifications will not be considered.

16.0 COMMUNICATION PROCEDURES.
Only those communications that are in writing (including email) from the FLR designated sole point of contact may be considered as a duly authorized expression on behalf of the Requestor. Also, only written communications (including email) from participating Respondent will be recognized by the Requestor as duly authorized expressions on behalf of said Respondent.

17.0 REVIEW.
The responses will be first reviewed by the FLR-SSERCA Evaluation Committee to verify if they conform to ITN instructions contained in the submittal paragraph (Paragraphs 3.0 & 26.0). Responses that do not conform to said instructions may be rejected and not reviewed further.

18.0 TERM OF AGREEMENT.
Unless sooner terminated as provided herein below, the term of any agreement resulting from this ITN shall be for a period of five (5) years. The terms of this Agreement may be extended for one (1) successive extension term of five (5) years each as long as both parties are not in default under this Agreement, at the time the extended term commences.

19.0 TERMINATION.
In the event of a breach of this agreement by either party that is not remedied within 30 calendar days after delivery of written notice of such breach, the aggrieved party may
terminate this agreement by written notice to the other party. FLR shall be liable only for payment for commodities/services rendered prior to the effective date of termination.

20.0 FORCE MAJEURE.
Neither party shall be in default if any failure to perform is caused by anything beyond the control of such party.

21.0 LIABILITY.
No party shall be liable or responsible for indirect, special, incidental, punitive or consequential damages suffered as a result of this agreement, except to the extent such damages arise from the gross negligence or willful misconduct of a party.

22.0 LAW, VENUE AND LITIGATION.
This ITN is governed and construed pursuant to the law of Florida, with venue being in Leon County, Florida. In case of dispute each party shall be liable and responsible for its own legal costs, expenses and attorney fees.

23.0 DISQUALIFICATION OF RESPONDENT.
Only one ITN from an individual, firm, partnership, corporation or association under the same or different names will be considered. Reasonable grounds for believing that a Respondent is involved in more than one ITN for the same item will be cause for rejection of the highest priced ITN in which such Respondents are believed to be involved. Any or all proposals will be rejected if there is reason to believe that collusion exists between Respondents. ITNs in which the prices obviously are unbalanced will be subject to rejection.

24.0 EQUAL OPPORTUNITY EMPLOYER.
The nondiscrimination clause contained in Section 202, Executive Order 11246 as amended by Executive Order 11375, relative to Equal Employment Opportunity for all persons without regard to race, color, religion, sex or national origin, and the implementing rules and regulations prescribed by the Secretary of Labor are incorporated herein.

25.0 ADDITIONAL TERMS AND CONDITIONS.
No additional terms and conditions included with the ITN response shall be evaluated or considered and any and all such additional terms and conditions shall have no force and effect and are inapplicable to this ITN. If submitted either purposely through intent or design or inadvertently appearing separately in transmittal letters, specifications, literature, price lists or warranties, it is understood and agreed the general and special conditions in this ITN solicitation are the only conditions applicable to this ITN and the Respondent's authorized signature affixed to the Acknowledgment Form attests to this.

26.0 PREPARATION AND ELECTRONIC SUBMITTAL INSTRUCTIONS.
Proposals shall be electronically formatted and submitted to conform to letter-size (8 ½ by 11) paper. Responses to this ITN must be submitted via the FLR website at
http://www.flrnet.org/?page_id=10797. Submissions by any other means than this website will not be considered.

26.1 FORMATTING

a. Response Format

1. Questions and requests for information may not be rearranged, regrouped, or divided in any way.

2. Information submitted that is not requested by FLR may be considered to be supplemental, not subject to evaluation by the committee members.

3. If there is any information or required submittals which due to size or binding cannot be incorporated following the proper tab, the Respondent must provide information following the numbered tab, telling the evaluation committee where the information can be found in the response.

b. Tabular Format

Proposals should include a Table of Contents with page number references. The Table of Contents should contain sufficient detail and may be organized according to the same format as presented in this ITN, to facilitate easy reference to the sections of the proposal as well as to any separate attachments which should be identified in the main Table of Contents. If a Respondent includes supplemental information or non-required attachments with its proposal, this material should be clearly identified in the Table of Contents and organized as a separate section of the proposal. The following is an outline that may be followed.

- Tab 1: Completed and signed ITN Acknowledgement Form
- Tab 2: Cover Letter/Executive Summary.
- Tab 3: Company Experience/References
- Tab 4: Overview of storage solutions and Price Offer*.
- Tab 5: Terms of Payment and Payment Schedule.
- Tab 6: Marketing, supplemental or non-required materials.

*Note: Effective Period of Proposals. Under this ITN, Respondent’s pricing shall remain firm for a period of no less than one hundred and twenty (120) days following the closing date, in order to allow time for evaluation, approval, and award of the contract. Any Respondent who does not agree to this condition shall specifically communicate in its proposal such disagreement to FLR, along with any proposed alternatives. FLR may accept or reject such proposed alternatives without further notification or explanation.
28.0 NEGOTIATION PROCESS.
Negotiations will be done by at least two (2) members of the FLR-SSERCA Evaluation Committee. Contact outside of the FLR-SSERCA Negotiation members may result in the disqualification of the respondent from participation in this ITN.

29.0 SELECTION.
The successful proposal will be the proposal submitted in response to this ITN on or before the submittal deadline that is the most advantageous to FLR-SSERCA. The FLR-SSERCA Evaluation & Negotiation Committee will evaluate proposals and reach a consensus opinion of the best solution and price offer. The evaluation of proposals and the selection of the successful proposal will be based on the information provided by Respondent in its proposal.
INVITATION TO NEGOTIATE
ITN #FLRCLDS2016

ACKNOWLEDGEMENT FORM

Procurement of Cost-effective Long-term Data Storage

I certify that this response is made without prior understanding, agreement, or connection with any corporation, firm or person submitting a response for the same materials, supplies or equipment, and is in all respects fair and without collusion or fraud. I agree to abide by all conditions of this response and certify that I am authorized to sign this response for the respondent and that the respondent is in compliance with all requirements of the Invitation to Negotiate, including but not limited to certification requirements. This information is to be included as part of your electronic submittal.

Submit Response To:  http://www.flrnet.org/?page_id=10797
CALENDAR OF EVENTS*
Invitation to Negotiate

Procurement of Cost-effective Long-term Data Storage

A. August 29, 2016
Invitation to Negotiate Issued and Advertised.

B. September 8, 2016 – 10:00 a.m. (all times are Eastern)
Mandatory Pre-Negotiation Conference. Conference will be held concurrently at Florida LambdaRail Headquarters, 1607 Village Square Blvd, Suite 4, Tallahassee, FL 32309 and also by Videoconference as needed and requested in advance.

D. September 28 2016 – 12:00 Noon
Last day for respondents to submit written questions to FLR. Submit questions via email to ITN@flrnet.org.

E. October 12, 2016 – 5:00 p.m.
FLR will respond to written questions and questions not answered at the pre-ITN conference. Response will be an addendum to the ITN.

F. October 31, 2016 – 2:00 p.m.
Respondent proposals due in FLR as outlined in the ITN.

G. November 14, 2016 5:00 p.m. to November 8, 2016 8:00 a.m.
Short list of respondents selected for further negotiations posting period. (If needed)

H. November 16, 2016 – November 17, 2016
Short List Negotiation Sessions (If Needed).

I. November 18, 2016.
Best and Final Offers due (If needed).

J. November 21, 2016
72 Hour posting of final award(s)

* Requestor reserves the right to adjust these dates as necessary.