



**A Model of Cooperation**

**Request for Information  
For  
Network Services Capabilities**

Request for Information Number: RFI 2017-01

Issued: **January 3, 2017**

Submission Date: **January 31, 2017**

**Registration is required with contact person as noted in 1.1  
You must register by providing your name, company name, telephone number, and email address**

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## **PART 1 – RFI OVERVIEW**

### **1.1 Invitation to Respondents**

This Request for Information (“RFI”) is an invitation by Interuniversity Services Inc. (“ISI”) on behalf of Higher-Ed IT Shared Services (HISS) to obtain feedback from suppliers with experience in providing network services, as further described in Part 3 – Deliverables (the “Deliverables”).

Interuniversity Services Inc. (ISI) is a not-for-profit company incorporated in 1984 by four independent universities. ISI currently provides selected central administrative services to eighteen member institutions in Nova Scotia, New Brunswick, Prince Edward Island, and Newfoundland/Labrador, thus reducing their overall operating costs, improving services, and providing a framework for cooperation among the membership, while maintaining their independence.

In addition, ISI shares office resources with, and provides administrative support to Novanet Inc. Nova Scotia Council on Admissions and Transfers (NSCAT) and Higher-Ed IT Shared Services.

Higher-Ed IT Shared Services (HISS) is a consortium governed by the 11 Nova Scotia Post-Secondary Education institutions (NS-PSE’s).

HISS is comprised of the following ISI member institutions:

- Acadia University,
- Atlantic School of Theology,
- Cape Breton University,
- Dalhousie University,
- Mount Saint Vincent University,
- NSCAD University,
- Nova Scotia Community College,
- Saint Mary’s University,
- St. Francis Xavier University,
- Université Sainte-Anne, and
- University of Kings College.

Any one institution, any combination, or all of the above may be active participants in this initiative.

For the purposes of this procurement process, the “ISI Contact” shall be: **David Davidson, CEO (david.davidson@interuniversity.ns.ca)**.

### **1.2 The Purpose**

The information obtained from this RFI may be used to develop a Request for Proposal (RFP) at a later date. This RFI is a preliminary fact-finding process for the purpose of obtaining information, and identifying what information should be provided in an RFP. The purpose of this RFI is to provide an opportunity for respondents to give feedback on the specific information they would need in order to respond to a subsequent RFP. This RFI is not a request for bids or proposals. HISS is not requesting any binding cost or confidential information. If an RFP is issued at a later date, it may be based on responses to this RFI.

### **1.3 Not a Prequalification**

The material in this RFI package is for the solicitation of feedback only. Responding to this RFI is not a prerequisite to receiving any Request for Proposal for Network Services. However, all Respondents are encouraged to indicate their level of interest by responding to this RFI with its comments in order to facilitate a better understanding of requirements and Industry perspectives.

#### 1.4 Submission Date

Responses to this RFI will be accepted until January 31, 2017. Responses are to be submitted as per the submission requirements. The information received after that date will be considered only to the extent reasonable, in the sole opinion of HISS, given the progress of the Work at the time of receipt of the said information.

### PART 2 – RFI INSTRUCTIONS

#### 2.1 Submission Requirements

Respondents should submit proposals to **Bonfire** (Online Tendering Portal) as described in Appendix B. RFI response are **required** to follow the format and questions contained in Part 3. Please limit the entire response to no more than **25-30 pages**. Supplemental information may be provided but should be relevant to the purpose of the request.

#### 2.2 General Information

ISI or HISS does NOT plan to share your responses or make your responses public. Respondents are recommended not to include any trade secrets, non-budgetary costing, or confidential information. ISI or HISS takes no responsibility for the accuracy or completeness of any information supplied in this RFI and will not be responsible for any costs incurred in responding to this RFI.

#### 2.3 Timetable

Issue Date of RFI	<b>January 3, 2017</b>
Deadline for Questions	<b>January 20, 2017</b>
Deadline for Issuing Addenda / Updates	<b>January 24, 2017</b>
Submission Date	<b>14:00 hours Atlantic Time Tuesday, January 31, 2017</b>
Interviews (if necessary)	<b>February, 2017</b>

#### 2.4 Responses

The publication of this RFI must not be construed as a commitment on HISS's part to issue a subsequent "Request for Proposal" for HISS's requirement. No contract or other form of commitment will be entered into with any Respondent based on responses to this RFI. This RFI must in no way be considered as authorization by HISS for Respondents to undertake any work, which would result in costs to HISS or ISI.

HISS will not be liable for, nor will it reimburse any Respondents for any costs, fees or expenses which any Respondent incurs in the preparation or submission of its response to this RFI. HISS will not be bound by anything stated herein. HISS reserves the right to change, at any time, any or all parts of the requirement as it renders necessary.

Respondents are advised that any information submitted to HISS in response to this RFI may be used in the development of a subsequent RFP. Respondents will not be bound by any aspect of their response to this RFI. All responses to this RFI will be held by HISS and ISI on a confidential basis (subject to applicable legislation), and remain the property of HISS and ISI once they have been received and may be used to support further development of internal planning documents and decisions, and possibly an RFP. Note that responses to the RFI will not be returned.

## **2.5 Enquiries**

Any questions from Respondents concerning this RFI must be made in writing to the ISI Contact stated above, via e-mail on or before the Deadline for Questions defined in clause 2.3.

Respondents are to assume all responsibility for the successful delivery and receipt of all questions to the ISI Contact stated in clause 1.1. Questions submitted to any other person but the ISI Contact, or in any other form, will not be answered. Responses given in any other manner than that which is outlined above will not be binding upon any party.

Enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where HISS makes a determination that the enquiry is not of a proprietary nature. HISS may edit the questions or may request that the respondent do so, so that the proprietary nature of the question is eliminated, and the responses will be made publicly available to other potential respondents. Enquiries not submitted in a form that can be distributed to all Respondents may not be answered by HISS. If a question is determined to be proprietary, in HISS's sole discretion, HISS reserves the right to respond only to that party.

## **2.6 Format of Response**

Respondents should review and provide comments to the attached documents and respond to the set of questions contained in Part 3. The following format is requested:

- a) Title Page: The first page of each response, should be the title page, which should contain:
  - i) the title of the respondent's response;
  - ii) the name and address of the respondent;
  - iii) the name, address and telephone number of the respondent's contact;
  - iv) the date; and
  - v) the RFI number and a list of all addenda
  - vi) authorized signature
- b) Numbering System: Respondents are requested to prepare their response using a numbering system corresponding to the one in this RFI Section 3.4. All references to descriptive material, technical manuals and brochures included as part of the response should be referenced accordingly.

## **2.7 Clarifications**

Immediately following the closing date, HISS may require clarification of written responses and/or comments received as a result of the responses to this RFI. If required, any clarification will be requested by the ISI Contact after the closing date of the RFI.

## **2.8 Interviews**

In an effort to enhance the value of this RFI process HISS may choose to meet with one or more of the respondents to seek greater clarify or greater understanding of the respondent's response.

## **PART 3 – THE DELIVERABLES**

This is NOT a solicitation Document

### **3.1 Background**

Information technology has become an increasingly integral part of Post Secondary Education (PSE) academic and research programs, institutional administration, and student life. Network-enabled services such as online course delivery, lecture capture, “smart” learning spaces, video streaming, simulation, big data and computational analysis, virtual reality, data visualization, video conferencing, real-time collaboration and communication, cloud computing and data storage, entertainment, and video surveillance are becoming mainstream and essential to the institution’s core operations.

With the increased prominence and reliance on the network, an opportunity has been identified related to the management of data networks within and across the 11 NS-PSE institutions. Currently 9 of the 11 institutions’ networks<sup>1</sup> are provisioned and managed independently. Increased demand by the campus communities for ubiquitous connectivity, enhanced security and greater bandwidth continues to present challenges both operationally and financially. High level analysis indicates that coordinating the design, deployment and operation of these networks could enhance the ability to meet these growing user expectations and could also consolidate and rationalize activities, leverage purchasing power and improve overall network performance and security.

### **3.2 Requirements**

Higher-Ed networks must provide widespread wireless connectivity in the expanding world of the Internet of Things, wired/fibre connectivity as required, highly secure, abundant bandwidth, high capacity connectivity between servers and with other networks such as Canada’s advanced research and education network (CANARIE) and the Internet, be always there, and be always on. The purpose of this RFI is to identify various ways these ideal network characteristics and outcomes can be achieved and maintained, what services are available in the marketplace to assist or deliver these ideal network characteristics, and what are the high-level impacts to operations, technology and finances.

### **3.3 Current Situation and Challenges**

The networks currently in place at the 11 NS-PSE institutions vary significantly in size, complexity and investment. Network architecture planning has been limited and multiple vendor solutions have been implemented:

- Switches and routers (Cisco, Dell and HP)
- Firewalls (Cisco, Fortinet, Juniper, Palo Alto and Zentyal)
- Wireless access (Aruba and Cisco)
- Network management tools (Aruba Airwave, Cacti, Cisco Prime, CiscoWorks, Greylog, HP Intelligence Management Centre, LAN Sweeper, Nagios, NetDisco, NFSN, PTRG/MRTG and Zabbix plus home grown tools)

The following table provides a summary of key characteristic ranges of the NS-PSE institutions broken down by network size.

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<sup>1</sup> Atlantic School of Theology’s network is provisioned and managed by Saint Mary’s University; University of King’s College’s network is provisioned and managed by Dalhousie University.

<b>Characteristic</b>	<b>Ranges</b>			<b>Total</b>
Network Size	Small	Medium	Large	Large
Network Complexity	Simple	Moderate	Complex	Complex
Number of Institutions	4	3	2	11
Campuses/Institution	1 to 5	1	5 to 14	34
Size of User Community (student enrollment plus staff FTE*)	720 to 4,000	5,000 to 8,000	12,000 to 23,000	65,000
Access Interfaces	600 to 4,000	5,000 to 13,000	16,000 to 28,000	78,500
Wireless Access Points	30 to 200	400 to 700	800 to 1,900	4800
Network Technicians (FTE*)	1.0 to 1.5	1.5 to 2.5	1.8 to 11.0	23
Third Party Service Annual Spend	\$25K to \$90K	\$95K to \$180K	\$650K to \$800K	2M
Installed Base (approximate replacement cost)	\$0.75M to \$3M	\$4.4M to \$9.6M	\$14M to \$29M	\$71M

\* Full Time Equivalent

In addition to the 9 independently managed networks, the ACORN-NS network provides interconnectivity between these 9 independent networks and with the CANARIE network. Comparably, ACORN-NS is considered to be a small but complex network. The ACORN-NS organization is governed by the 11 NS-PSE institutions and the network is managed by Dalhousie University.

The following are the key challenges faced to varying degrees by each of the NS-PSE institutions:

- Relentless and growing demand for network services especially in the areas of wireless connectivity and bandwidth;
- Expanding skills gap of technical staff as network technology becomes more advanced and sophisticated;
- Very high user expectations for the reliability and robustness of the network services;
- Increasing need to be proactive and remain current with the evolving security processes and controls;
- Downward pressure on operating budgets and fluctuating capital investment; and
- Aging network infrastructure.

### 3.4 Deliverables

Respondents are requested to provide the following descriptions and answers. The intent is to identify and describe what network services are available or could be possible and worthy of further consideration. Descriptions and answers should be kept at a reasonably high level.

#### 3.4.1 Network Services Layers

For the purpose of this RFI, network services have been segmented into 3 major layers as depicted in the diagram below. Our preferred relationship is with a service provider that can address all 3 network service layers either directly or through the use of sub-contractors or partners.

## Network Services Model

### **Architecture, Design & Planning**

(ITIL Service Design)

- *Engineers and maintains an overall forward-looking network architecture and detailed design including integration with other PSE institutions, ACORN and other partners*
- *Develops and maintains a network security model*
- *Creates and maintains a network service plan addressing business requirements, technology direction and trends, service level objectives, security standards, operational constraints and financial resources*

### **Ongoing Renewal Program**

(ITIL Service Transition)

- *Creates and executes an ongoing network renewal program to implement, update, refresh and retire network equipment and capabilities in accordance with the detailed design;*
- *Includes:*
  - *management & leadership*
  - *program and project management*
  - *procurement of equipment and services*
  - *equipment installations, testing & cutover*
  - *change management*

### **Operations**

(ITIL Service Operations)

- *Monitors network for security, performance and service levels*
- *Fulfills service requests*
- *Resolves service incidents*
- *Identifies, analyzes and manages the resolution of issues*

### **3.4.2 Descriptions and Questions**

- a) For each of the 3 network services layers outlined in the above model, please describe the services offered by your organization and the approach you would take to help NS-PSE institutions address the key network services challenges described in Section 3.3.
  - i) What would be the benefits and operational impacts of these services?
  - ii) What are the cost considerations for these services? What factors influence these services' costs? (eg. for a medium sized network, architecture and design services would require an estimated number of consultant days at a rate of so many dollars per consultant day).
- b) Opportunities may present themselves when considering the possible consolidation of certain network services across 2 or more NS-PSE institutions. Please describe the opportunities your organization would recommended for NS-PSE institutions to consider.
  - i) How would your organization assist in implementing these opportunities and over what timeframes?
  - ii) What would be the benefits, impacts and cost considerations for each of these opportunities?

- c) In the current network service business model, operational costs and asset ownership are retained by the individual NS-PSE institution and require regular infusions of capital to expand, refresh and maintain the network. With the current financial climate, this business model is increasingly difficult to sustain. What alternatives would your organization recommend to deliver a long-term, stable and viable network service business model?
  - i) What would be the benefits, impacts and cost considerations for each of these alternatives?

### **3.4.3 Respondent Profile**

- a) Please provide a summary profile of your organization including areas of business, size, years in business, business location(s) and ownership structure.
- b) Describe your organization's history and experience in delivering network services similar to those outlined in 3.4.2 above. What experience does your organization have in Higher-Ed?
- c) Describe your organization's resource capabilities in delivering network services. How many consultants and technicians does your organization employ? Where are they located? What are their skill sets? What network services infrastructure and facilities does your organization have in place to deliver network services to the NS-PSE institutions?
- d) Describe the key network equipment supplier partnership arrangements that your organization has and why they are relevant for this purpose.
- e) Identify any potential sub-contractors/partners that your organization may engage in the delivery of network services for this purpose and in what capacity these sub-contractors/partners would be used.

### **3.4.4 Suggested RFP Information Details**

Given the information and realistic budgetary estimates you have provided in your response to the RFI, in the event that a Network Services RFP is issued by HISS, please outline the suggested additional information, details, and metrics that should be included in the RFP in order for your organization to be able to provide a thorough and competitive response.

## APPENDIX A – REFERENCE FORM

Each proponent is requested to provide three (3) references from clients who have obtained similar goods or services to those requested in the RFI from the proponent in the last **five (5) years**. Post-secondary education references are preferred, references should not include NS-PSE institutions. HISS may choose to contact some or all of the references.

### Reference #1

Company Name:	
Company Address:	
Contact Name:	
Contact Telephone Number:	
Date Work Undertaken:	
Nature and relevance of Assignment:	

### Reference #2

Company Name:	
Company Address:	
Contact Name:	
Contact Telephone Number:	
Date Work Undertaken:	
Nature and relevance of Assignment:	

### Reference #3

Company Name:	
Company Address:	
Contact Name:	
Contact Telephone Number:	
Date Work Undertaken:	
Nature and relevance of Assignment:	

## APPENDIX B – BONFIRE INSTRUCTIONS

### Submission Instructions for Suppliers

#### Requested Information

Name	Type	# Files	Requirement
Proposal	Word	1	Required
Attachments	PDF	-	Not Required

#### Requested Documents:

Please note the type and number of files allowed. The maximum upload file size is 100 MB.

Please do not embed any documents within your uploaded files, as they will not be accessible or evaluated.

#### 2. Upload your submission at:

<https://interuniversity.bonfirehub.ca/opportunities/private/8f05ffc3b6d7b79191466debed64e7a1>

Your submission must be uploaded, submitted, and finalized prior to the Closing Time of **Jan 31, 2017 2:00 PM AST**. We strongly recommend that you give yourself sufficient time and **at least ONE (1) day** before Closing Time to begin the uploading process and to finalize your submission.

#### Important Notes:

Each item of Requested Information will only be visible after the Closing Time.

Uploading large documents may take significant time, depending on the size of the file(s) and your Internet connection speed.

You will receive an email confirmation receipt with a unique confirmation number once you finalize your submission.

Minimum system requirements: Internet Explorer 8/9/10+, Google Chrome, or Mozilla Firefox. Javascript must be enabled. Browser cookies must be enabled.

#### Need Help?

Interuniversity Services Inc uses a Bonfire portal for accepting and evaluating proposals digitally. Please contact Bonfire at [Support@GoBonfire.com](mailto:Support@GoBonfire.com) for technical questions related to your submission. You can also visit their help forum at <https://bonfirehub.zendesk.com/hc>