



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

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ADDENDUM # 4

August 16, 2019

RFP #7598870

TITLE: ENTERPRISE INTERNET SERVICE PROVIDER & CORE ETHERNET WAN SERVICES - DOA

BID CLOSING DATE & TIME: MONDAY, AUGUST 30, 2019 10:00 AM (Eastern Time)

ATTACHED ARE THE VENDOR QUESTIONS WITH STATE RESPONSES.

NO FURTHER QUESTIONS WILL BE ANSWERED.

Interested Parties should monitor this website on a regular basis, for any additional information that may be posted.

Robert DeAngelis

Senior Buyer

The following are questions received with State responses regarding RFQ 758870 ENTERPRISE INTERNET SERVICE PROVIDER & CORE ETHERNET WAN SERVICES - DOA

Vendor A

- 1) The RFP seems to be excessively broad. Will DoIT except responses that are more limited in the overall scope that is being outlined in this RFP
 - a. From our past experience with the State, much of what is being asked for in this RFP is beyond what they have been willing to pay for in the past / afford based on State Budget
 - b. If we are to provide an alternative response
 - i. We will need bandwidth and addresses for all the locations you require
 - ii. Will you be able to provide this list
 - iii. There is no format for pricing an alternative (even for the original request)
 1. Do we just make one up for the alternative
 - c. Any chance of extending this RFP response timeline - [Please see purchasing website for any extensions](#)
 - d. Any chance of having a Vendor Meeting to Discuss this more in depth - No

Section 2: Wide Area and External Networking Connectivity Services

- 1) The State Agencies themselves would not require Internet 2 (that is typically a semi-need of Higher Education and Healthcare). Why would this be a requirement in this RFP? - [Due to the fact that we have State Library services as well as a high level of interaction with Higher Education and research institutions we require internet 2 connectivity.](#)
- 2) Can we provide a bid that does not include Internet 2. **Yes**

Section 3: General Scope of Work

Your request as for 99.999% uptime. Can that be better defined. Are we talking about at least one of the Core Sites being up and running?

[SLA level of 99.999 % uptime/availability results in the following periods of allowed downtime/unavailability:](#)

- **Daily:** 0.9s
- **Weekly:** 6.0s
- **Monthly:** 26.3s
- **Yearly:** 5m 15.6s

[The SLA calculations assume a requirement of continuous uptime \(i.e. 24/7 all year long\) with additional approximations as described in the source.](#)

99.999 % is typically dependent upon the physical as well as the logical design of the network. Today we provide a 10GB ELAN network between the (3) core sites. In the past we have suggested a more robust physical design that would eliminate physical folds in the network. The State has yet to go with this option (more money to build the redundancy) and we have left the folds in place. **Given budget constraints will the State review both the current physical design (which wouldn't meet the 99.999% uptime requirement for all sites being up) as well as the current design currently in place?**

Whoever wins the award must meet the 99.999%

Other Locations beyond the Core Sites:

While we are able to add other sites to this fiber optic mesh network and there were some listed, there was no bandwidth for these sites listed and the list included items such as :

All partnered Health Care Institutions

All public, municipal and State Agencies

While these are all possible, there are no addresses. Further down you were looking for pricing, but that is impossible to provide without more detail. **Were you looking for us to just confirm that it was possible to connect these sites into the meshed network that we would deploy?** - Yes

On the Meshed Network design.....would you actually have this as a Meshed Network (ELAN) for all these sites as opposed to an EVPL network (where an individual site can communicate to a hub (or multiple hubs) but not every other member on the network? - No

The Network Will:

We don't understand how a vendor can provide an aggregate charge model for the entire network when the locations themselves are not defined (you list the possible other sites – no addresses, etc). We can do something like this but the network has to be fully defined (and as currently provided it is far from that). –

- Other locations may include, but not limited to
 - The Rhode Island Statehouse, 82 Smith Street, Providence
 - 311 Danielson Pike, Scituate
 - RI Dept. of Transportation Maintenance Headquarters, 360 Lincoln Ave, Warwick
 - DMV Middletown Office, 52 Valley Road, Middletown
 - DHS Providence Regional Family Center, 206 Elmwood Ave., Providence
 - DMV Safety & Emissions Control, 325 Melrose St. Providence
 - Dept. of Environmental Mgt Headquarters, 235 Promenade St. Providence
 - Woonsocket Regional Office, 217 Pond St, Woonsocket

We don't quite understand the requirements under this section and would request a call /meeting to get more clarity. Our understanding that today a remote site would be able to connect to either one of the (3) core sites. Your description of a 1GE circuit should be divisible into 4 circuits is confusing as is the 10GB circuit being divisible into 6 circuits. Please clarify. - Please disregard

By our read, you would have (6) circuits going to the (3) Core Sites. Does that mean that any location other than those (6) circuits would need to be able to hit any one of those (6) NNI's (core site circuits)?? Yes

DDoS protection – there are MANY flavors of DDoS protection with price tags all over the place. Do you have more definition as to what you are looking for. **What is your Requirement of DDoS Protection?** Awarded vendor to provide industry standard DDoS protection.

From My SE team:

1. Is DDoS Detection and Mitigation required on the WAN or just the Internet circuits? **Internet only at this time.**
2. Are two Ethernet Switches required at each of the Core Node locations for the 10Gbps WAN? **Yes, preferred**
3. Can a single entrance be used at the Core Node locations, then diverse routes on the backbone? **No**
4. Can the WAN provider provide Transport to an Internet 1 / Internet 2 provider POP only? The State of Rhode Island would order service from the Internet 1 / Internet 2 provider and “cross connect” from Internet provider POP to Wan Provider Layer 2 transport network.
Alternative approaches and/or methodologies to accomplish the desired or intended results of this RFP are solicited. However, proposals which depart from or materially alter the terms, requirements, or scope of work by this RFP may be rejected as being non-responsive.
5. Can Provider bid on Internet 1 only? **See #4 answer above**
6. Do the “Other Locations” on the WAN require diversely routed fiber? **No**
7. Can each “other location” terminate directly to the closest CORE Node location? **Yes, site capacity dependent**
8. Will each “other location” utilize bandwidth on the Core Node 10G ring? **Yes**

Redundancy, Business Continuity

Based on reading this....the requirement seems to be that the State would require not only diverse entrances and diverse paths into each one of the core sites, but would also require two sets of equipment at each site. **Would that be an accurate assessment of your needs?** See vendor A question 2 above

Since we currently provide a 10GB Ring today for the State and the State has not elected to go with redundancy of the actual physical paths today on the current Ring topology, and this request is even for diverse entrances, has the State found new monies for this expansive requirement? **The awarded vendor must provide diverse physical pathing.**

What is mentioned in paragraph 2 is Wave Division Multiplexing Equipment (DWDM), but the request is only for 10GB of aggregate bandwidth. If it is for only 10GB total, there isn't a real need for DWDM gear on premise. **Why is there an ask for this equipment?** The solution must account for future needs and growth.

Internet Connectivity - By our read you would want (1) Internet connection at one of the core sites and a 2nd connection at one of the other core sites. Would that be correct **Yes and the capability of internet at any core location**

Why would there be a requirement that the NOC be in Rhode Island. Many providers have multiple NOCs throughout the United States and wouldn't a multi-NOC environment be preferable to a NOC that happens to be in Rhode Island? [Please disregard](#)

Systems Integration and Collaboration

This is a WAN request. Why would you expect any WAN vendor to be able to implement new applications across the WAN. Why would you expect your WAN vendor to assist in the procurement of any Cisco equipment or Software? [Please disregard](#)

Internet 2 connectivity is typically provided by a few Educational based providers. Why would the State require this as part of services that are for State agencies. We work with many States and this has never been a requirement elsewhere [See vendor A, Question 2, Section 1 above.](#)

Technology and Demark Locations

While we would support delivering 10GB connections at the Core Sites, why is there a requirement to offer a minimum of 10GB at the remote sites. While we would be capable of doing that if the request was made, prior requests have come in at 20Meg and lower and putting a 10GB box at each remote sites seems to be costly. **Do you really need this for every installation?**

Will we be able to see the pathways at each of the (3) core locations for diverse entrances prior to submitting pricing. Your window of July 29th seems to be fairly tight.

[Fiber service needs to be capable of supporting at least 10GB.](#)

I DON'T UNDERSTAND: Can we talk to someone who can explain this one?

[Not at this time.](#)

The Vendor is responsible for any costs associated with the uninterrupted continuation of this cross-agency WAN transport environment and an integrated end to end redundant virtual connection of up to 10G between the Division of Information Technology and all connected public agencies over the private WAN.

The information below is also part of the Scope of Work -which perhaps the SE's can better understand.

However, today we have (2) ELANs that I understand. One is between the (3) core Sites and the other is an ELAN for the remote sites that also connect back to the (3) Core Sites....

We might have a need to flush out paragraph 2 below on the DoIT VLANs. We currently have a network in place with NNI's and several remotes. We believe we are delivering you today what is being asked, but the wording is somewhat confusing.

The network will

- support prioritized (as determined by DoIT) Ethernet data, voice and video traffic.
- The 10G bandwidth will be allocated via DoIT VLANS using vendor VPLS (or substantively similar) technology as required to support collaborative applications between any of the existing DoIT supported agencies, institutions of higher education, law enforcement entities, other branches of government and any other community anchor institutions the DoIT has need to connect to.
- Any future reconfiguration required to reallocate bandwidth among entities on this private WAN will be provided free of charge by the vendor within twenty-four hours of the initial request.
- All other existing external peered networks (such as presently exist between the hospitals and specialty external health organizations) shall be accessible to DoIT at no additional charge and shall traverse the private WAN in accordance to DoIT generated VLANS and bandwidth that is allocated (or reallocated) to support a particular application.
- All private peering with any external government or commercial entities shall be unmetered and not chargeable against the subscription rate.

- The charge model shall be for an aggregated 10G of bandwidth, not circuit based.
- A 1GE circuit should be divisible into 4 circuits at no additional cost.
- A 10G circuit shall be divisible into 6 circuits at no additional cost. Division of Information Technology can have multiple concurrent ISP peering sessions as long as the aggregate does not exceed the subscription rate.
- Any additional IP addresses as may be required in the future will be provided by vendor at no additional cost.
- Distributed Denial of Service [DDoS] Protection
 - Automatic detection and mitigation of DDoS attacks.
- 24x7x365 Network Monitoring and Network Operation Center Services.
- Portal to tools providing access to network traffic usage and traffic flow at a granular level.
- Access to training and technology events.

Redundancy

I am confused on this piece. And don't know how quite to ask the question back to them. They want (two separate circuits at each one of the (3) Core Locations as part of the "WAN". So normally what I would suggest is that if these were in essence EVPL hubs, I might take one Hub out of one of our POPs and one Hub out of another POP and diversely route them into the facility. In the case of Rhode Island, maybe one out of 235 Promenade and one out of 5 Central. I guess we can do this for each of the (3) Core locations? That would make say (6) ELAN Nodes – since they aren't EVPL hubs – that are really the "Head-Ends" that all the other sites would connect into

Below that is beyond me and not sure if the SE's want to ask more of his requirements there.....and where does the optical multiplexor come in? They are saying on 10GB total.....just regular switches ??

Not clear if a State question, appears to be an internal Vendor question or comment.

Redundancy, Business Continuity

To ensure business continuity, the WAN shall have redundant (diverse) aggregation points (AP's) capable of rerouting in the event of failure of either aggregation point. In addition, redundant routing and redundant circuits shall be provided to support seamless uninterruptable operation between any DoIT CORE node location, especially the State Data Center, and all other existing end point entities in the event of any circuit or campus failure at any location. All CORE node locations shall be immediately provided with two separate circuits to the WAN, each entering the building or campus from a different direction from a different vendor networking grid to ensure continued operation in the event of the failure of any portion of the vendor grid network (Dual Diverse Entrances).

Vendor is to utilize VPLS technology to ensure virtual reconfiguration per DoIT's requests. All endpoint optical wave division multiplexing equipment, fiber switch gear and optical to network conversion equipment to be supplied and maintained by vendor, and to be totally compatible with existing Division of Information Technology routers and data, voice and video applications. Each optical multiplexer port is to support up to 10G. To ensure business continuity all supplied equipment shall be redundant at sites to ensure continued operation in the event of any hardware failure. Vendor equipment handoff shall have the ability to be delivered in increments of 1G and 10G via fiber or copper, media and completely compatible with all existing DoIT networking endpoint hardware.

The vendor shall provide a secondary ISP peering session for a DR/Secondary site capable of the full subscription rate at no additional charge. The secondary site should be already in existence and must be on net. Total bandwidth shall not exceed the subscription rate.

Vendor shall provide Primary and Secondary DNS at no additional costs. The WAN will be continuously monitored at the very least from a local Network Operation

Center (NOC) in Rhode Island on a 24/7 basis at no additional charge to Division of Information Technology. Emergency response to any WAN component failure or other conditions as may affect performance or reliability shall be immediate and provided on a 24/7 basis. The mean time to repair any such failure shall not exceed 4 hours. All spare components including wave division multiplexors shall be stocked at the vendor's Rhode Island locations. All network utilization statistics, bandwidth measurements and associated logs will be available to the Division of Information Technology on a continuous basis. An incident response system will automatically escalate problem notification to specified DoIT staff and will also include any incident identification of any other connected member to the private WAN. Security within the WAN will be in strict accordance to SANS 20 and ISO 27002 standards, and other requirements as defined by the Division of Information Technology.

Internet 1

We are reading this requirement as 2.0GB with burstable to 3.0GB but also expandable to 10GB (at a minimum). Is that correct? [Yes](#)

If we provided Internet to (2) different CORE sites from (2) different POPs on our network, diversely routed, each with 2.0GB burstable to 3.0GB would that suffice for the design you laid out. We were confused on your description of your needs regarding subdivision of Internet delivery.

[Bandwidth will be required to be expandable to 10GB over the life of the contract.](#)

Internet 2

Again, why is Internet 2 a requirement of the State's Internet delivery?

[See vendor A question 2 Section 1 above](#)

Vendor B

1) How is the State RI currently leveraging Internet 2 connectivity? Can you please clarify the business need for I2 connectivity? a. As a further qualifier the RFP states that alternative and or methodologies approaches are solicited. Would DoIT consider multiple awards for I1/I2 connectivity as well as WAN connectivity? [See vendor A question 2 Section 1 above](#)

2) Can you further define "shall be integrated as a single system" within section 2 background? [The State prefers a single vendor to provide the requested services.](#)

3) Section 3, Can you provide the list of Name and address of "all partnered Health Care Institutions" [See vendor A question 2 Section 1 above](#)

4) The RFP notes the selected vendor must maintain a Network Operations Center in RI. Please confirm this a requirement? Does this NOC in RI have to be staffed 24/7/365? [A Network Operations Center must be maintained within the 48 contiguous United States. The NOC must be staffed 24/7/365.](#)

5) Will the State of Rhode Island consider a bid from a provider who cannot provide Internet2 service? [Yes](#)

6) What is the business reason for the State of Rhode Island to have direct peering with NOX?

[See Vendor A, Section 2, Answer 1 above.](#)

7) Does the current provider meet 99.999% availability without route diversity and diverse entrances or are these improvements the State is seeking? [Awarded vendor will meet this requirement.](#)

8) How many IPV4 addresses are currently under the State's control and what scenario drives IPV4 address growth? What are the State's 5 year growth projections? [n/a](#)

9) How many IPV6 addresses are currently under the State's control and what scenario drives IPV6 address growth? What are the State's 5 year growth projections? *n/a*

10) *Distributed Denial of Service [DDoS] Protection*: Can the State define the amount of clean traffic of the total 10Gb that would be required? *The State would like as much clean traffic as possible.*

11) Can the State provide examples of Technology Events where access is required? *Awarded vendor shall provide appropriate training and technology education relevant to provided services.*

12) How many open forums to promote new collaborative initiatives, applications and technology does the State require per year? *n/a*

13) Can the state provide demarcation location addresses for the following: The Northern Crossroads (NoX), Akamai, Microsoft Azure, Google, AWS, National Federated Identity and Authentication services, Internet 2 Public cloud services like Box.net, Amazon Web Services, Educational Tools, etc. and access to Aastra/level3 hosted PBX and SIP phone services?

No

14) Can the State identify which locations have room UPS systems available?

3 Core locations

15) At which locations is Internet 1 service currently being delivered?

DOA location only

16) For the State's requirement: *Internet-1 availability must be 100% with the automatic redirection of services to any Division of Information Technology's CORE node locations which terminate Internet traffic in the event of site unavailability at any of these locations.* Redirection of services typically requires "switching" of services which will not maintain 100% or 99.999% availability. Will the State accept automatic switching without SLA penalty if one of the State's locations becomes unavailable?

Depends on whose equipment fails and causes unavailability.

17) According to their website, *"Internet2 operates the nation's largest and fastest, coast-to-coast research and education network that was built to deliver advanced, customized services that are accessed and secured by the community-developed trust and identity framework, with Internet2 Network Operations Center powered by Indiana University."* Which resources does the Department of Administration & Division of Information Technology currently access over this network?

Education resources are accessed currently.

Vendor C

1. With respect to the Security Questionnaire included with the RFP documents, could you clarify what types of information and what methods of information handling are meant by

"STATE OF RHODE ISLAND requires all third parties that handle STATE OF RHODE ISLAND citizen information to complete this survey questionnaire"?

The Security Questionnaire is not required for the ISP RFP.

Vendor D

1. Will the State consider one of these technologies in place of the requested "On Demand" Ethernet?

- Burstable MPLS connections. [The State will consider](#)
- Metro Ethernet with CIR that can be modified against a static physical port speed (UNI) [The State will consider](#)

2. Is the State looking for a single vendor for all three services or will it consider multiple? [Please see Vendor B question 2 answer](#)

3. Is the aggregate bandwidth pricing model a requirement? [Yes](#)

4. Our last mile access pricing is dependent on location. Can the State provide anticipated locations (addresses) envisioned for the WAN over the next three years? [No](#)

5. For those sites that require access diversity/dual entrances: Please provide detailed information regarding the dual entrances/conduits (street, manhole, etc.) [Awarded vendor will receive this information.](#)