



Purchasing Services
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January 11, 2017

Invitation to Negotiate No.

17-13-MH

Entitled:

Application Delivery Controllers

Opening Date:

January 25, 2017 at 3:00 p.m.

Addendum No. 1

Review the following changes/additions/clarifications to Invitation to Negotiate (ITN) No. 17-13-MH Application Delivery Controllers to be addressed in submitted proposals:

Below is the pertinent information that was shared by USF Purchasing and USF Information Technology at the optional pre-proposal meeting that was held on December 12.

Included are USF Purchasing and USF IT introductory statements

Followed by USF's responses to all the vendor questions we received. USF responses are in red.

Purchasing Introductory Statements:

1. I can't stress how important it is for you to read thoroughly the ITN document. Vendor qualifications are on pages 7 and 8. And, we are looking for two proposals: one original hard copy and one electronic copy (on CD-ROM or preferably on a USB flash drive). Email and faxed copies will not be accepted. The hard-copy must be delivered by Jan 25th at 3PM. If it comes in 1 second after 3PM by the clock at the purchasing reception desk, it will not be accepted.
2. There are three pages of specifications starting on page 16 of the ITN. If you have questions today or questions after you leave, email Michael Hernandez (mahernandez@usf.edu) with Purchasing.
3. In the back of the ITN, there are about 6 forms. These forms are in every solicitation USF puts out. If something doesn't apply to you, just put N/A and turn it in. If purchasing has a question, they can reach back out to you. It's not a fatal error.
4. These are some important dates:
 - Proposals are due on Jan 25th at 3PM
5. If you're going to mail your proposal to USF, we strongly suggest that you give yourself an extra day even if you're using an overnight delivery service. Sometimes deliveries to USF are centrally delivered and are then dispersed to the campus which may cause delays. The proposal must arrive at Purchasing by 3PM on Jan 25th.
6. If you're sending someone from your office to hand deliver the proposal, make sure you give them a map to our campus (included in the ITN). We have a large campus. Don't let them get lost...especially if they're racing against the clock to get the proposal here by 3PM on the 25th.
7. For the electronic copy of the proposal, don't give us 50 separate PDF's. Just give us one PDF for the entire proposal. Separate files for each section or data sheet isn't preferred.

IT Introductory Statement:

We have two pairs of high-availability Application Load Balancers (Application Delivery Controllers) that load-balance various services that we host in our primary and secondary datacenters. So, there's a pair of ALB's in our primary SVC data center and a pair in our secondary datacenter. Both are 10Gbps-attached. Both are reaching end-of-support at the end of 2017. So, this ITN is being put out to look for replacements.

We've gone through a fair amount of effort to list all of the specifications and features that we're interested in. Hopefully we've covered them all. But, if we haven't, that's what today is about.

It should be noted that this ITN isn't entirely specific to the two pairs of load-balancers that we have on the main campus. Our USF Health folks also run load-balancers and now that IT and Health are merging functionality, we will be looking at potential load-balancers for their environment. We won't be looking at immediate purchases since their equipment hasn't reached end-of-support. But, we'll be looking for a larger university-wide solution.

So, tell us what products you have that suit the ITN requirements. We're not listing a specific bill of materials in the initial ITN document. Tell us what products and features are available and we'll select a solution that best fits our university-wide environment.

Vendor Questions with USF responses in red:

1. So, the first question that comes to mind is items 1 and 2 where it specifies physical and virtual appliances. Does that mean that in the proposal, we should provide one or two of each?

USF Response-The ITN response doesn't necessarily need to provide a quote or bill of materials for specific equipment. At the end of the ITN, once we select the awarded vendor, then we'll start talking about the equipment we'll be buying. Right now, we're just looking at features and functionality. So, propose an appliance that we can handle the 20Gbps of throughput that we specified. Propose a virtual appliance that has the feature set we need. Once we've awarded the ITN, we'll work with that vendor on specific quotes and bills of materials.

2. Will the virtual appliance need to support 20Gbps?

USF Response- Virtual appliances aren't being used in production at USF currently. We're interested in using virtual appliances both on premise and in the cloud. We are interested in being able to extend our server environment into public and private cloud environments. I don't think 20Gbps will necessarily be required in that environment. We'd be looking at multiple smaller appliances running on individual hypervisors. We're interested in where the features sets differ between physical and virtual appliances (if any). But, we need throughput numbers for the virtual appliance.

How the virtual appliances can interact with the physical appliances is also of interest. Is there a management interface that covers both? We are hoping to have a consistent GUI that manages the entire environment.

3. Do you want pricing proposed for both physical and virtual appliances?

USF Response- We do need to see pricing for what you're proposing. But, not so much as a proposal for specific equipment configurations that we may purchase. Let's say you have 40G-attached appliances that are capable of 20Gbps throughput. Give us a price for that appliance because price will be a consideration in the ITN decision process. But once that selection is made, then we'll negotiate pricing and specific equipment configurations.

The ITN process will work as follows:

- We'll evaluate the proposed solutions
- We'll figure out which solution best matches our requirements
- We'll ask those vendors to bring a sample of appliances so that we can perform a proof-of-concept test in our environment.
- Then, we'll make the final decision on the preferred vendor. And, we'll sit down with that vendor to negotiate final pricing on the equipment configurations we'll purchase.

We do need to see pricing for the initially proposed equipment. We realize there are going to be a large number of options which may be individually priced (application-layer security, etc.). But, include that information so we can understand the product pricing options. Give us as much information as you can in the initial proposals.

Through the ITN process, once IT looks at the proposals, if we need more details, before we do the proof-of-concept, we'll reach out to the vendor for more information. Also, once we've reviewed the proposals, there will be individual vendor meetings (in-person or on the phone) so we can ask questions about the proposals before we get to the point of evaluating equipment.

4. Line 12 specifies dedicated offload of SSL. Does that apply to both physical and virtual appliances? And can you give us a bit more detail about USF's plans for physical and virtual appliances?

USF Response- Today, our current load balancers are physical. Our datacenter infrastructure group is looking products like NSX where some of those network functions are virtualized. We're interested in how these products will work in that environment. Will they work with NSX or some other hypervisor platform?

So, you're correct line 12 is specifically for the physical appliances. The virtual appliances will obviously use the general purpose CPU of the hypervisor for SSL processing.

For the physical appliances, if we were today just replacing our current appliances, we would be looking for that SSL-offload capability on the new physical appliances. As we get further into this, we'll know better as we look at the product features sets. But, I think we will still have physical appliances in place. We'll start moving some VIP's into virtual load-balancers either integrated with products like NSX or just as stand-alone load-balancer VM's running on a standard hypervisor.

One of the things we're looking for is when we can move load-balancing into the virtual realm, that prevents a lot of pin-balling...going back and forth across the network and server infrastructure. That helps avoid traffic bouncing between the virtual and physical environment.

5. So, you'd say that the feature sets around the virtual have a higher degree of importance than SSL-offload?

USF Response- We know we're not going to get SSL offload in the virtual environment. We're not likely to install SSL hardware in the hosts of the virtual environment. So, we're only interested in SSL offload in the physical load-balanced appliances.

6. So, you're looking for a variety of physical interfaces? 40G and 100Gbps interfaces were called out. Are you looking for them in the same appliance?

USF Response- If you have multiple versions of the appliance that has 10G or 40G interfaces, that's fine. We mentioned in the ITN description, our current load-balancers are pushing around 6Gbps and they are 10Gbps attached (one inside and one outside interface). There's a network diagram in the ITN that shows our current topology. So, 6Gbps is getting tight on a 10Gbps link. That's why we're interested in physically attaching the new appliances at 40Gbps. If the only available load-balancers offer LACP-bonded 10Gbps interfaces. That's fine, as long as the total throughput of 20Gbps is there. So, that's why we said 10, 40, and 100G interfaces. So, if there isn't an offering at 40G and probably not an option with 100G, then show us a bonded option where we can bond together multiple lower-rate interfaces. Obviously that difference will come into play as we evaluate the proposal. If one vendor has a 40G appliance and another doesn't then that's a consideration.

Our current SVC datacenter is 100G attached to the campus backbone and has 100G interfaces internally to it (not to the servers today, the most we're doing is 40G). But, we do have 40G and 100G-attached equipment in our datacenter. That's why we're looking for both 40G and 100G-attached appliances. Our Winter Haven data center doesn't currently have 40G interfaces. So, in that location, we'll likely be purchasing a 10Gbps appliance that can bond multiple interfaces for higher throughput.

7. Is it safe to assume that all those who respond will be invited to the meetings?

USF Response- It will depend on the proposal. The ITN lists criteria which will be used to evaluate the proposals. For example, if we have 10 different proposals, we won't likely bring all 10 in for the meetings. We'll look at the proposals and bring in some number of vendors for the meetings and evaluations. Based on our evaluation of the initial solution proposal.

8. So, you're going to do the PoC with multiple options?

USF Response- Yes, we will definitely test multiple vendors. We don't know how many vendors at this time.

9. As a point of curiosity, what are your plans for the public cloud?

USF response- We have existing test environments in Azure and some folks doing work in AWS. There has been no official decision on a specific public cloud offering. So, this is one of the somewhat open-ended aspects of the ITN. Tell us what public cloud services your products can work with and that will help us decide what best fits our environment. Unfortunately, there's not a single public cloud vendor that we're looking to support at this time.

The site-selection or GSLB functionality will very likely be what we'll use to extend our services into the public cloud. It's fairly easy to implement. We don't think that'll be too difficult to implement in any public cloud offering.

10. Would it be better to put the data sheets themselves in the response rather than just links to the data sheets?

USF Response- Links are sufficient. We'll be able to use those links in the electronic copy to view the data sheets.

11. You have a small questionnaire in the ITN that says which way you'd prefer to be paid. Is your intention to use a P-card or a PO?

USF response- Given the size of this purchase, it will be done using a PO.

Keep in mind the forms that are included are generic to all solicitations that USF issues, and some of the forms may reference items that are not germane to this specific solicitation.

12. Is there a way to opt-out of the ITN's VISA P-card certification because we don't typically accept P-cards?

USF Response- Fill it out the best way that fits your business. The P-card certification will not be an evaluation criteria. Keep in mind the forms that are included are generic to all solicitations that USF issues, and some of the forms may reference items that are not germane to this specific solicitation.

13. Do you really want to see our financial records?

USF Response- We need documentation that will give us a snapshot. So, a letter of good standing from your financial institution would work. If you're a public company, then a Dun & Bradstreet rating would be an option. So, whatever you're comfortable providing. If you're a private company, a statement from your bank that you're in good standing and how long you've been with them would be an option. We'll also be looking at the customer references provided as part of the ITN.

14. Were there any questions about the current topology that USF is running?

USF Response- We need to make sure that the proposals will work in our environment. The current layer 3 interfaces for all of the subnets in our data centers are all run by the datacenter firewalls. So, terminating layer 3 on the load-balancer would not be an option because we wouldn't have the enforcement point on that interface. We need to make sure that the ITN responses don't propose to make the load-balancers a router since it won't likely work in our environment.

The current load-balancers are bridged. They don't currently do the VLAN translation themselves. So, there's an inside and outside VLAN. Our layer 2 core devices do the necessary VLAN translation. For example, VLAN 1301 gets translated to 1351. The router lives on 1301 and the load-balanced servers live on 1351. So, the VLAN bridging functionality allows us to force the traffic through the load-

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balancers. This offers us the ability to easily move a server ‘behind’ the load-balancer keeping it on the same subnet by just changing the VLAN. We don’t necessarily prefer the current topology. But we need to make sure it’s clear that terminating the layer 3 subnets on the load-balancer would not likely work in our environment because of the security policy enforcement requirements.

Note: Please note receipt of this addendum by signing and returning with your proposal response

Authorized Signature & Date

Print Name

Company Name