**EAST BAY
MUNICIPAL UTILITY DISTRICT**

Network Core and Server Switch Replacement

Request for Proposal
Questions & Responses v2

April 15, 2019

1.0 Questions and Responses

1. What is the make and model of the 20 IDF access switches?
   Answer: Cisco Catalyst 9300-48U & 24U and Catalyst 3560X-48PF-L

2. What does the 5 years of support entail?
   Answer: 5 years of Cisco Smart Net Total Care (formally SmartNet) services, provided on next business day basis, for standard technical, hardware and software support (SNTC 8X5XNBD). For a non-Cisco product, please quote the equivalent service support package as Smart Net Total Care.

3. What is the make, model, and software version of the non-Cisco firewall?
   Answer: We are not disclosing the firewall specifications. The firewall's LAN address is simply a target IP for the static routes. The firewall will not be participating in routing or packet tagging.

4. What is the model, and software version of the cisco firewall?
   Answer: We are not disclosing the firewall specifications. The firewall's LAN address is simply a target IP for the static routes. The firewall will not be participating in routing or packet tagging.

5. What is the model and software version of the Wireless LAN controller?
   Answer: Cisco 5508, v8.3.132.0

6. Is the "Intranet/Other Services" in the topology a switch?
   Answer: Yes, it is a Cisco Catalyst 3560

7. What are the makes, models, versions of the Row 1 and Row 2 stack switches?
   Answer:
   Row 1 – Cisco Catalyst WS-C3650-48TS, software version is not being disclosed
   Row 2 – Cisco Catalyst WS-C3750E-48TD, software version is not being disclosed

8. What are the "departmental servers" in the topology diagram?

   Answer: Windows 2012 R2.

9. How many of the departmental servers are directly connected to the core switch?
   Answer: No departmental servers are directly connected to the core switch.

10. Will the departmental servers still be directly connected to the Core after migration?
    Answer: There are no plans to connect servers directly to the core switch. All servers will be connected to a switch, switch stack or spine and leaf switch and then the switch will connected to both core switches.

11. For EIGRP to OSPF migration: Are all L3 devices running EIGRP right now?

Answer: Yes, Cisco L3 devices are running EIGRP. There are no non-Cisco devices running EIGRP or any other routing protocol.

12. Are there devices running EIGRP in the WAN network?
    Answer: Yes, all Cisco L3 devices are running EIGRP.

13. If there are devices running EIGRP in the WAN network, those also be migrated to OSPF? IF yes, please list those devices with make and model number?
    Answer: All devices on the WAN support OSFP.

14. The description about the data center topology states "the Data Center's (2) switch stacks and (2) additional Data Center host switches belong to a single network segment. The server switch stacks support (270) 1000BASE-T connections, providing connectivity to (4) VM Host clusters consisting of 12 servers supporting (367) VM guests. In total there are 70 physical servers." but the topology diagram shows Row 1 with stack of 2 switches and Row 2 with stack of 7 switches. Which is correct?
    Answer: The ports of the switch stacks and the (2) additional switches all belong in the same VLAN. Each switch stack member has 48 ports. The combined port capacity of the (2) switch stacks is 432 ports. The existing (2) switch stacks and the existing (2) additional Data Center host switches need to be connected to the new core switches.

15. On page 7, 1a ii: The requirement is about installing/configuring SDA-WW-LABKIT. While placing an order for this type Lab Kit, there are options needed to be chosen for the specific hardware configuration the customer wishes to buy. Can you please provide more information on what options need to be selected while buying the SDA-WW-LABKIT so the Proposer can price more accurately?
    Answer:
    DN2-HW-APL   Cisco DNA Appliance
    C9300-24U-A   Cisco 9300 Catalyst 24 port switch with UPoE
    C9300-NM-4M   Cisco 9300 4 port network expansion module
    AIR-AP4800-B-K9   Cisco Aironet 4800 Access Point
    AIR-CT3504-K9   Cisco 3504 Wireless Controller
    R-ISE-VMS-K9=   Cisco Identity Services Engine VM

    Please quote 7 years for the DNA licensing and 5 years of SmartNet for all equipment in the Lab Kit.

16. On page 7, 1a ii: Is the requirement to install/configure this Lab Kit in a contained and standalone topology and not in the live production network?
    Answer: The requirement is to install the Cat 9300 series switch included in the kit and connect that to the Core switch. The DNA fabric will not extend to the Core at this time

17. Page 7, 1a ii mentions using 9500 as border node so can you provide more information?
    Answer: This requirement has changed. For this implementation the border node will be the Cat9300 that comes with the DNA Kit.

18. How is storage connected to the existing 9396PX switch?
    Answer: Via OM3 multimode fiber to 10Gbps SFP (10Gbase-SR).

19. Are replacement SFPs included for the switch stack connectivity?
    Answer: The X2 module and SFPs for the switch stacks in Row 1 and Row 2 will be provided.

20. Are replacement SFPs included for the rest of the topology?
    Answer: No. Please included the replacement SFPs with the proposed solution.

21. Page 7, 1a iii: Is the requirement only about building a software defined spine-leaf (with 4 leaf) architecture which can support N9396PX (but not actually migrate the N9396PX) switches and connect it to the core?
    Answer: The spine-leaf architecture needs to support the function provided by the N9396PX, which is (2) standalone VLANs consisting of (35) ports on each switch for a total of (70) ports that need to be created on the spine-leaf architecture.

22. Page 7, 1a iii: Is the requirement for building software define Spine-leaf architecture and migrate to the N9396PX switches but not migrate to live servers?
    Answer: See answer to question 21. The requirement is to create (2) standalone VLANs to support (70) 10G ports.

23. Are the migrations of the server part of the scope?
    Answer: Provide configuration support to migrate (1) VMware cluster consisting of (2) Dell servers and (1) standalone Dell Server.

24. Page 9, 1b iii: The RFP requests 7 years of DNA advantage licenses, however in this point the support for Cisco SmartNET asked is 5 years. The ordering tool most likely does not allow these to be different, so the customer will may have to decide on one of the 2 options. Which option should Proposer base designs and pricing, 5 or 7 years??
    Answer: Price SmartNET for 5 years and the DNA advantage license for 7 years.

25. Page 9, 1biii: What does "iii. (5) years of software and hardware support with next business day delivery for replacement equipment" entail? Can you elaborate on the type of support required?
    Answer: See answer to question 2. Please price SNTC 8X5XNBD for the support of the products. Please quote 5 years of SmartNET and 7 years for the DNA Advantage license.

26. SDA-WW-LABKIT requires server to host a VM for ISE software. Are resources available in existing server to host the VM or should we include a server in the Bill of Materials?
    Answer: We have the VMware resources to host the ISE software.

27. Does the IP multicast configuration already exist? If so, can EBMUD provide more information if the design can support it. .
    Answer: IP multicast-routing is enabled but not configured.

28. What services will be using Multicast? Can EBMUD provide more information if the design can support it.
Answer: No services are configuration to use multicast routing. We would like to have a basic configuration built in order to enable multicast services in the future.

29. Page 10, 4h: The statement says "outline" so can you confirm that the objective is just to provide document outline describing best way to migrate the servers but it will be implemented by the EBMUD team rather than the Proposer.
Answer: Yes. A test server will be migrated as part of this scope of work. EBMUD will be migrating production servers at a later date.

30. In the Evaluation Criteria, pg. 13 A3: Can you provide more information about exact expectation and requirements the Life Cycle Support?
Answer: It is our internal evaluation of what the solution will require in terms of on-going management. For example, can we manage the solution in-house or do we need a technical services contract.

31. What devices are connected to Row 1 Switch Stack and Row 2 Switch Stack?
Answer: Dell servers running Windows, Sun Servers, Dell VM Hosts, Load Balancers, and Backup Infrastructure running Windows on Dell servers.

32. Do you plan to use the Catalyst C9500-48Y4C-A core switch as the border node? Or do you want separate pair of switches as border node?
Answer: This requirement has changed. For this implementation the border node will be the Cat9300 that comes with the DNA Kit. See answers to questions 15, 16, & 17.

33. Which version of DNA Center do you want to use for testing and configuration? Or do you want a recommend version?
Answer:

DN2-HW-APL	Cisco DNA Appliance
C9300-24U-A	Cisco 9300 Catalyst 24 port switch with UPoE
C9300-NM-4M	Cisco 9300 4 port network expansion module
AIR-AP4800-B-K9	Cisco Aironet 4800 Access Point
AIR-CT3504-K9	Cisco 3504 Wireless Controller
R-ISE-VMS-K9=	Cisco Identity Services Engine VM

Please quote 7 years for the DNA licensing and 5 years of SmartNet for all equipment in the Lab Kit.

34. Will EBMUD refresh all (20) IDFs as part of this RFP? How many switch stack does each IDF room have? Is it 2 switch stacks per IDF?
Answer: No. IDF switches are not being replaced by this project. Each IDF has (1) switch stack.

35. Wireless LAN Controller: What is the model number of existing?
    Answer: We have a Cisco 5508 WLC. This serves the current business network and legacy AP's. Any wireless configuration for DNA will be done on the equipment ordered in the DNA Kit.

36. Are there any Fiber Channel endpoints or switches in your network?
    Answer: No.

37. What types of applications are present in your data center?
    Answer: CRM, MS Exchange, File/Print, web based apps with an Oracle backend database, GIS mapping tools, CommVault, Load Balancer.

38. In page 7, C-1-a-I, you do NOT want to replace the server switch stacks but just upgrade the connections (to the new core Cat9500) to 10G and 4x1Gig. Is this correct? If so, do you already have the 10G X2 optics for the 3750E-48TD-S and the SFPs for the 3650-48TS?
    Answer: Yes, that is correct. The existing 3750E-48TD-S and 3650-48TS switches will remain and the current servers will stay connected to them. The spine & leaf section of the RFP will be the new server switches. The spine and leaf switches will run concurrently with the existing switches. We will be providing the X2 and SFP optics.

39. In page 7, C-1-a-iii, this statement "Replace the server switch stack environment with a software defined networking (SDN) spine and leaf solution to support future micro segmentation of the Data Center network and support migrating the existing (2) standalone Nexus 9396PX SAN connections into the spine and leaf configuration. " Does this "server switch stack" refer to ONLY the Nexus9396PX or the intention is to migrate all servers (at a later date and not part of this RFP) including the ones attached to the 3750E and 365048TS stacks??
    Answer: See answer to question 21. The intention is to provide leaf switches that will allow us to migrate the connections from the 3750E and 365048TS stacks at a later date, when the server team adds 10Gbps or 25Gbps capable cards to their equipment. One test server and one VM Host cluster will be migrated as part of this work to test the documentation provided. The existing Nexus 9396PX's port configurations (70 ports & 2 standalone VLANs) are to be re-created on the new spine-leaf switches to support moving the connections to the new spine-leaf architecture.

40. Please confirm that the Catalyst 6513 switches handle all Layer 3 functionalities in the current setup, including EIGRP routing and all VLAN's HSRP's as the default gateway on each subnet, and there are no Layer 3 routing interfaces or dynamic routing on the downstream switches, including Row 1 and Row 2 stacks.?
    Answer: The 6513 Core switch/routers are running HSRP and do handle all the layer 3 routing for all the VLAN's within the Administration Building (AB) in Oakland. There is an upstream router that participates in EIGRP routing in the AB and that is an ASR1001X router that connects the AB to our AT&T ASE WAN network. All routers that participate in EIGRP do so with the same EIGRP AS number. Switch stacks 1 and 2 in the data center at the AB do not perform any EIGRP routing.

41. . If the Cat 6513 are the only L3 switches running EIGRP, what are other EIGRP speakers on the network that they peer with and how many, for the purpose of the OSFP

migration?

Answer: The 6513 and ASR1001X perform EIGRP routing at the AB, as noted in Q40. Outside of the AB in Oakland there are (32) L3 switches/routers that participate in EIGRP, with (18) redistributing static routes.