



# Addendum

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## ADDENDUM NUMBER ONE

### RFP 12-1966

### VoIP – Setting a system standard

The above listed solicitation is hereby amended and clarified through the issuance of this addendum. The following questions were submitted on this solicitation. Questions and answers are being provided to all potential proposers to ensure fairness and impartiality.

NOTE: Metro's responses are in *Bold italic*.

#### Question #1:

Q: Can authorized resellers submit proposals on behalf of VoIP original equipment manufacturers?

A: *Yes. However, note:*

- *The vendor profile (section E of your proposal) is for the manufacturer and not the reseller.*
- *The standard being set is for the manufacturer, not the reseller.*
- *References must use the products proposed.*

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#### Question #2:

Q: How do you currently purchase MS licensing?

A: *Via our reseller DELL ASAP*

- What functional level is your current AD environment?

A: *2003*

- What types of licensing do you currently own for Exchange/Lync? What level CALs (Standard, Enterprise, PLUS?)

A: *Enterprise at MRC/Zoo, Standard at OCC*

- If MRC represents the main data center, is there a DR data center site identified?

A: *No, not yet.*

- What version of Exchange do you currently have deployed?
  - How many Exchange organizations? *1*
  - Number of sites *3*
  - Servers/Roles per site (Please provide data center names)  
*MEX(MRC server has Hub Transport, Client Access, Mailbox roles);*  
*ZEX(Zoo server has Hub Transport, Client Access, Mailbox roles);*  
*OCC-EX01(OCC server has Hub Transport, Client Access roles);*  
*OCC-EX02(OCC server has Mailbox roles);*

- What is the latency between Exchange server sites, if applicable -- **100Mb fiber backbone with < 15ms latency.**
- Users per site – **Please see Table 1 – Metro Facilities in the RFP.**
- Outlook Clients deployed – **Refer to Table 1 for the number of users. Assume each user is an Outlook client.**
- What sites have points of presence/internet access – **2 (MRC, OCC) Refer to Figure 3 – Metro’s Wide Area Network in the RFP.**
- Do they want the UM capabilities to have HA? – **Yes**
- What type of video do you anticipate using? Just webcams on PCs or video infrastructure integration? If so, what manufacturer? Tandberg, Polycom, Lifesize etc? **Undecided**
- Do you currently have hardware load balancers deployed in their environment? If so what manufacturer? **Yes, Citrix NetScaler MPX 5500**
- Do you currently have a defined DMZ/Perimeter network? What site/data center is this located? (We assume this is MRC) **Yes, 2 DMZs at MRC, OCC**
- Do you currently have a reverse proxy deployed (ISA, TMG, etc) **No**
- Do you currently use Microsoft System Center Operations Manager or Configuration manager? If not, what 3<sup>rd</sup> party monitoring/management tool is being used? **No**
- Do you have any Information Rights Management deployed? **No**
- Approximately how many users are non-POE per site? **Refer to Table 1 – Metro Facilities in the RFP. Assume that all phones will be IP phones requiring power either via PoE switches or power adaptors/injectors.**
- Approximately how many analog endpoints can be replaced with IP phones per site? **Refer to Table 1 – Metro Facilities in the RFP. Assume all phones will be IP phones.**
- Approximately how many analog endpoints must remain analog (because of cabling, etc) per site? **Refer to Table 1 – Metro Facilities in the RFP. Assume all phones will be IP phones.**
- Approximately how many
  - Hunt Groups – **Approximately 10, but the need for hunt group is identified by each department or work group.**
  - Supervisors per hunt group – **None defined.**
- We would likely do E911 integration at MRC. How many internet connections are available at MRC (for SIP trunk backup purposes?) **One at MRC**
- Is DPM being used for backups? If not, what is being used for backups? **No. Symantec Backup Exec 2010 R3**

### Question #3

For the procurement of hardware/software per RFP 12-1966 is the vendor required to use any OR state contracts?

**A: No, the vendor is not required to use any Oregon state contract.**

#### Question #4

Q: Within your existing VM/Server environment, are you able to comply with the requirements below for a Lync deployment on a VM host?

Note: The follow table represents a recommended hardware base configuration for a VM host as of Q4/2010.

Component	Spec
Server	Enterprise-grade server, with a minimum of 2 CPU sockets (or more)
CPU	Intel Xeon 5500 series or AMD Opteron 6100 series (2 GHz+) CPUs supporting NPT/EPT (Nested Page Tables/Extended Page Tables)
Network adapter	Dual (or more) 1 GbE or 10 GbE adapter with VMQ support is recommended for 10 GbE network adapter network adapter). Note: Network adapter chipsets from Intel, Broadcom, and other vendors support VMQ.
Storage	Two or more SATA or SAS HDD 10k rpm or higher (DAS), or equivalent storage, RAID 1 (VM host operating system usage), or equivalent SSD
Memory	32GB+ PC2-6400 DDR2, or PC3-8500 DDR3 Memory (or faster), must be ECC compliant

*A: Metro has a VM environment for its current servers. However, the vendor will provide the host environment infrastructure for the VoIP setup in their bid.*

Q: Within your existing storage environment, are you able to comply with the requirements below for a Lync deployment?

Note: Storage recommendations are based on typical enterprise-grade traditional hard disk drives, or equivalent enterprise-grade solid state drives (SSDs). Typical protocols for Storage Area Networks are iSCSI, Fiber Channel, or other equivalent solutions.

Type	Spec
DAS	Direct Attached Storage with SAS (15k or 10k rpm) or SATA (7.2k rpm) drives
iSCSI SAN	Storage Array Network with 1 GbE or 10 GbE iSCSI storage with enterprise class SAS (15k rpm) drives, or equivalent SSD drives. 2+ GB cache.
FC SAN	Fiber connected Storage Array Network with 4, or 8Gbps Fibre Channel with enterprise class SAS (15k rpm) drives, or equivalent SSD drives. 4+ GB cache.
CSV	Cluster Shared Volume (CSV) is a volume that is simultaneously available to directly read from and write.

Recommended storage:

- Dedicated SAN LUN for each VM guest virtual drive (VHD or passthrough)
- Cluster Shared Volume (CSV)

Not recommended: *FYI*

- Host with less than 3 network adapters
- Shared Host/Application/iSCSI network adapter configurations
- Shared LUNs for VM guest or application workloads

*A: Metro has a NAS environment for its current servers. However, the vendor will provide storage for the VoIP setup in their bid.*

Q: Within your Networking environment, are you able to comply with the requirements below for a Lync deployment?

Note: Per the RFP detail we feel you are compliant here.

Recommended networking:

- 3 network adapters/host: 1 network adapter reserved for host access, one 1 for shared VM guest application workload, 1 (or more) dedicated to iSCSI SAN access
- MPIO is recommended for network access to SAN
- Separation of application and iSCSI traffic (dedicated iSCSI segment)
- Network adapter speed: 1 GbE or 10 GbE.
- Implement VLANs to isolate network traffic

**A: Metro will provide switching fabric to connect the VoIP equipment in Metro's computer room.**

Q: Within your DB environment, are you able to comply with the requirements below for a Lync deployment?

Note: If you have an existing SQL cluster and file share we don't need to add to our solution.

Lync Server Role	Qty	Physical			Virtual		
SQL Server Back End Server (FE)	2 or more	8 core	32 GB	80K	4 core	16 GB	40K
SQL Backend (M/A)	NA	8 core	16 GB	230K	4 core	12 GB	115K
File Server	1	4 core	4 GB	80K	2 core	3 GB	40K

**A: If needed, vendor will provide the SQL cluster/other RDMBS technologies in their bid for the VoIP setup.**

## Question #5

What is the role of the "Admin" and the "Manager" (section IP-1 and IP-2) users with reference to their interaction with their respective telephones?

**A: It is a term that Metro is using to define a phone with a set of features described. See Appendix B, IP1 and IP-2.**

Do they act as "quasi" attendants?

**A: This depends on the preferences of the manager of each work group.**

Do they need to know the phone/presence/availability of people in their departments?

**A: Yes**

Generally, what features of a prospective phone system will make their business lives more productive?

**A: Appendix B lists features of interest to Metro.**

In section IP-5: What does RUG stand for?

**A: The ability to Remotely UpGrade (RUG) wireless phone device over the wireless network as opposed to having to use a base station.**

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## Question #6

How many analog ports (besides faxes) are required at each location? Our records indicate that Oregon Convention Center has 440 analog ports at that one installation alone.

*A: Please refer to Table I for the number of users. Assume each user (135) will have an IP phone.*

Where is the Metro Recycling site? That site has a Nortel Option 51 with a Nortel Symposium Call Center at it. It is not listed.

*A: The Recycling Information Center (RIC) is located in the Metro Regional Center.*

How many telephones of what type are desired for each location?

*A: The number and type of phones by location has not been determined. Please state the unit cost of each type of phone listed in Appendix B, IP-1 – 5.*

How many conference room phones per location?

*A: The number and type of phones by location has not been determined. Please state the unit cost of each type of phone listed in Appendix B, IP-1 – 5.*

What is the purpose of the color displays on the phones and the XML programmability? Is there a specific application in use now?

*A: Metro prefers that VoIP sets have Color graphics, XML programmability in order that when integration is required with other application it is available.*

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## Question #7

Does Metro now have or plan to have MPLS class network services provided to each of the sites to manage the voice bandwidth needed to serve each of these sites?

*A: Metro has a layer 2 switched 100Mb fiber backbone. At this time, Metro does not plan to have a MPLS network.*

Will Metro or the IT contractor for Metro provide the required QoS settings within the existing or upgraded routers and switches within the network that will serve each of these sites?

*A: Metro will provide the required QoS settings within the routers and switches.*

Which of the sites are planned to be replaced with new VOIP telephone systems in the initial first phase of this network upgrade?

*A: Currently, there is no set plan on what part of the Metro agency will go with the new VoIP telephone systems. It can be assumed as renewal and replacement funds are available for phones and provided the site network infrastructure is ready for VoIP, that site will be replaced with a VoIP system. As a reference, the order of the phase could be parts of the Oregon Zoo, South Transfer station, Central Transfer Station, parts of MRC, parts of OCC, parts of PCPA, Keller, Expo. Please note that this may change.*

Which of the sites are planned to be replaced with new VOIP telephone systems in the second and subsequent phases of this network upgrade?

*A: Please see response to previous question.*

Here is a list of the questions for each site that we have:

**Metro Regional Center (MRC) site, Oregon Zoo (ZOO) site, Oregon Convention Center (OCC) site, Expo Center (EXPO) site, Portland Center for the Performing Arts (PCPA) Antoinette Hall site, Keller Auditorium (KA) site, Arlene Schnitzer Concert Hall (ASCH), Metro Central Transfer Station (MCS), Metro South Transfer Station (MSS)**

Our solution will require a POE switch port available to each of the VOIP phone users at the sites. Each VOIP telephone has a 2 port data switch to enable the user work station PC and VOIP phone to share one network connection. Are there currently enough POE switches and POE port capacity at this site to accommodate each VOIP telephone user network connection assuming that all users will have a VOIP telephone with the new solution?

**A: Metro will provide for the PoE switches. The VoIP phones should have 2 ports for data.**

We need to know if we need to provide any additional POE data switch equipment or if your IT department or IT contractor will provide this?

**A: Metro will provide for the PoE switches. They will be 802.3af compliant.**

Will the VOIP telephone system for this site be installed in an existing equipment rack or do we need to quote the installation of an equipment rack for this system at this site?

**A: Metro will provide rack space for any equipment that will be going in at the sites.**

How many central admin telephone answering position console telephones are needed at this site?

**A: Metro requests that the bidder provides model and cost for a single IP phone as specified in Appendix B, Section IP1 to IP5.**

How many total telephone soft keys, line keys and line expansion keys are needed for each of these central admin answering positions?

**A: The proposal will provide the cost for a single line expansion key..**

Will these central admin telephone answering position console telephones be making use of 1 GBps or 100 Mbps work station network connections?

**A: This will depend on the access switch the phones are plugged into, however generally 1GBps is what they will plug into.**

How many of these central admin telephone answering positions be making use of CTI or computer telephone integration for the initial installation?

**A: The number and type of phones by location has not been determined. Please state the unit cost of each type of phone listed in Appendix B, IP-1 – 5.**

How many department admin telephone answering position console telephones are needed at this site?

**A: The number and type of phones by location has not been determined. Please state the unit cost of each type of phone listed in Appendix B, IP-1 – 5.**

How many total telephone soft keys, line keys, line expansion keys and shared call appearance keys are needed for each of these department admin answering positions?

**A: The proposal will provide the cost for a single line expansion key.**

Will these department admin telephone answering position console telephones be making use of 1 GBps or 100 Mbps work station network connections?

**A: This will depend on the access switch the phones are plugged into, however generally 1GBps is what they will plug into.**

How many of these department admin telephone answering positions be making use of CTI or computer telephone integration for the initial installation?

**A: The number and type of phones by location has not been determined. Please state the unit cost of each type of phone listed in Appendix B, IP-1 – 5.**

How many manager phones are needed at this site?

**A: The number and type of phones by location has not been determined. Please state the unit cost of each type of phone listed in Appendix B, IP-1 – 5.**

How many total telephone soft keys, line keys, line expansion keys and shared call appearance keys are needed for each of these manager phones?

**A: The proposal will provide the cost for a single line expansion key.**

Will these manager telephones be making use of 1 GBps or 100 Mbps work station network connections?

**A: This will depend on the access switch the phones are plugged into, however generally 1GBps is what they will plug into.**

How many of these manager admin telephone answering positions be making use of CTI or computer telephone integration for the initial installation?

**A: The number and type of phones by location has not been determined. Please state the unit cost of each type of phone listed in Appendix B, IP-1 – 5.**

How many standard phones are needed at this site?

**A: The number and type of phones by location has not been determined. Please state the unit cost of each type of phone listed in Appendix B, IP-1 – 5.**

How many total telephone soft keys, line keys, line expansion keys and shared call appearance keys are needed for each of these standard phones?

**A: The proposal will provide the cost for a single line expansion key.**

Will these standard telephones be making use of 1 GBps or 100 Mbps work station network connections?

**A: This will depend on the access switch the phones are plugged into, however generally 1GBps is what they will plug into.**

How many conference telephones are needed at this site?

**A: The number and type of phones by location has not been determined. Please state the unit cost of each type of phone listed in Appendix B, IP-1 – 5.**

How many wireless telephones are needed at this site?

**A: The number and type of phones by location has not been determined. Please state the unit cost of each type of phone listed in Appendix B, IP-1 – 5.**

Do you need system power backup for this new VOIP system at this site?

**A: Metro will provide power backup.**

Does Metro want to implement an internal integrated voice mail system within this VOIP telephone system at this site?

**A: Yes. Metro expects the VoIP telephone system and voice mail system be integrated.**

If no internal voice mail system will be used, will an external MS Exchange 2010 voice mail system be used at this site?

**A: Not applicable per response to preceding question.**

How many user voice mail boxes are needed at this site?

**A: Please refer to table 1 for the number of users. Assume each user has a voice mail box.**

How many users at this site will need to initially make use of Unified Messaging?

**A: Please refer to table 1 for the number of users. Assume each user has a unified messaging.**

What type of email client/server software is now used at this site and will this continue to be used with the new VOIP telephone system with Unified Messaging at each site?

**A: Microsoft Exchange 2007 is the version currently being used for all of the sites. In future, one or two Exchange 2010 servers will be used for all sites. Currently, there is one Exchange server at the MRC building that has users for MRC, South, Central, BlueLake, St John Landfill, Borland, Oxbow Park. There is a Exchange server at the Zoo, that has users for the Zoo, Condors. There is a Exchange server at OCC building that users for OCC, Keller, Expo, PCPA.**

If you plan to switch to some other email client/server software in the future what is the manufacture and messaging protocol that will be used?

**A: Metro has no plan to switch to another e-mail client/server software.**

Is any ACD Automatic Call Distribution capability needed for this site initially?

**A: Yes and only for the MRC site in the Recycling Information Center.**

If so how many ACD groups are needed?

**A: One initially, but this may go up to more.**

How many users will be needed within each group?

**A: Six for the initial group**

How many supervisors are needed for each group?

**A: At least one.**

Is advanced ACD reporting needed for the initial installation of this ACD system?

**A: No but should be available.**

Is CRM integration needed for the initial installation of this ACD system?

**A: No.**

Does Metro need to have speech recognition capability for the initial installation of the internal ACD system at this site?

**A: No.**

How many SIP trunks are needed when this new VOIP system is initially installed at this site?

**A: None, initially. However, the proposed system must support SIP trunks.**

Is integrated video conferencing needed for the initial installation of this system at this site?

**A: No, but there should be an option to add this.**

**St Johns Landfill (SJLF) site**

To facilitate 911 identification we can propose VOIP telephones that can be used with one analog POTS line and with a network VOIP connection.

How many of the VOIP telephones at this location will need to have its own POTS line connection?

**A: 1.**

How many VOIP telephones does Metro want to have proposed for this location?

**A: Please refer to table 1 on the number of users to be supported.**

**Latex (LTX) site**

To facilitate 911 identification we can propose VOIP telephones that can be used with one analog POTS line and with a network VOIP connection.

How many of the VOIP telephones at this location will need to have its own POTS line connection?

**A: 1.**

How many VOIP telephones does Metro want to have proposed for this location?

**A: Please refer to table 1 on the number of users to be supported.**

**Oxbow Regional Park (OXB) site**

To facilitate 911 identification we can propose VOIP telephones that can be used with one analog POTS line and with a network VOIP connection.

How many of the VOIP telephones at this location will need to have its own POTS line connection?

**A: 1.**

How many VOIP telephones does Metro want to have proposed for this location?

**A: Please refer to table 1 on the number of users to be supported.**

**Blue Lake Park (BLP) site**

To facilitate 911 identification we can propose VOIP telephones that can be used with one analog POTS line and with a network VOIP connection.

How many of the VOIP telephones at this location will need to have its own POTS line connection?

**A: 1.**

How many VOIP telephones does Metro want to have proposed for this location?

**A: Please refer to table 1 on the number of users to be supported.**

**Borland Facility (BOR) site**

To facilitate 911 identification we can propose VOIP telephones that can be used with one analog POTS line and with a network VOIP connection.

How many of the VOIP telephones at this location will need to have its own POTS line connection?

**A: 1.**

How many VOIP telephones does Metro want to have proposed for this location?

**A: Please refer to table 1 on the number of users to be supported.**

**Oregon Zoo Condors site**

To facilitate 911 identification we can propose VOIP telephones that can be used with one analog POTS line and with a network VOIP connection.

How many of the VOIP telephones at this location will need to have its own POTS line connection?

**A: 1.**

How many VOIP telephones does Metro want to have proposed for this location?

**A: Please refer to table 1 on the number of users to be supported.**

**Zoo Lights site**

To facilitate 911 identification we can propose VOIP telephones that can be used with one analog POTS line and with a network VOIP connection.

How many of the VOIP telephones at this location will need to have its own POTS line connection?

**A: 1.**

How many VOIP telephones does Metro want to have proposed for this location?

**A: Please refer to table 1 on the number of users to be supported.**

**Washington Park Train Station site**

To facilitate 911 identification we can propose a VOIP telephone that can be used with one analog POTS line and with a network VOIP connection.

How many of the VOIP telephones at this location will need to have its own POTS line connection?

**A: 1.**

How many VOIP telephones does Metro want to have proposed for this location?

**A: Please refer to table 1 on the number of users to be supported.**

**Chinook Landing site**

To facilitate 911 identification we can propose VOIP telephones that can be used with one analog POTS line and with a network VOIP connection.

How many of the VOIP telephones at this location will need to have its own POTS line connection?

**A: 1.**

How many VOIP telephones does Metro want to have proposed for this location?

**A: Please refer to table 1 on the number of users to be supported.**

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**Question #8**

1- Please provide Nortel Option 11 and Option PBX software release versions.

- **OCC – 2521 Release 4**
- **MRC – 2911 Release 25**
- **EXPO – 2121 Release 5**

2- Pricing and Products: Can we assume that network switching components are separate from this RFP? **Yes.**

3- For a phased migration-do you have a site list, by site priority that should be considered?

**A: Currently, there is no set plan on what part of the Metro agency will go with the new VoIP telephone systems. It can be assumed as renewal and replacement funds are available for phones and provided the site network infrastructure is ready for VoIP, that site will be replaced with a VoIP system. As a reference, the order of the phase could be parts of the Oregon Zoo, South Transfer station, Central Transfer Station, parts of MRC, parts of OCC, parts of PCPA, Keller, and Expo. Please note that this may change.**

4- Can you identify user phone locations where only CAT3 cabling is available?

**A: Some areas of Metro have CAT3 cabling; however, as funding is made available Metro will replace it with CAT5e cabling infrastructure.**

All other terms, conditions, and requirements of the original solicitation remain in full force.

Issued August 16, 2011

  
Tim Collier  
Metro FRS Deputy Director

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