



*Virtual Environment  
For  
Yemen Mobile*

## Virtual Environment Specifications :

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### 1- Bidders Qualification:

Any bidder could consider himself as a qualified bidder who has the right to participate at the bidding activity if he submits the required information and all the Evidence documents as follows:

- A qualified bidder is *an Agent or an authorized representative* VMware company.
- A qualified bidder is *an Agent or an authorized representative* Microsoft company.
- He has enough experience in Microsoft & VM field.
- Yemen Mobile company has the right to enquire about the correctness of submitted information and will ask for reference names and addresses of the executed projects to be attached to the Evidence Documents.

### 2- Site Description:

Yemen Mobile is interested in transfer the physical environment to virtual environment within some services as follows:

- Current physical server at HQ:
  1. Domain server
  2. Additional domain server
  3. File server
  4. XENApp server (12 server)
  5. Proxy server
  6. Antivirus server
  7. SQL application server
  8. Participant DB server
  9. Old warehouse DB server
  10. Documentation server
  11. DHCP server
  12. Executive secretarial and office management
  13. Health care system
  14. Data store for XEN SERVERS
  15. DB Test Environment
  16. SMS application
  17. Redundant for echarge server
  18. Additional Varity applications

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The main specification with CPU & Memory Usage for main services as following:

	Server	CPU specification	CPU utilize	RAM	RAM utilize
1	Domain server	Intel Xeon 3.4GHz (4 cores)	20%	4 GB	3 GB
2	Additional Domain	Intel Xeon E5430 2.7GHz (8 cores)	20%	4 GB	1.4 GB
3	Exchange server	Intel Xeon E5530 2.4GHz (16 cores)	10%	49	43.3
4	Proxy server	Intel Xeon E5530 2.4GHz (16 cores)	10%	8 GB	6 GB
5	ESET	Intel Xeon 3.4GHz (4 cores)	5%	4 GB	900 MB
6	Xen06	Intel Xeon E5430 2.7GHz (8 cores)	80%	46	13.5
7	Xen01	Intel Xeon E5530 2.4GHz (16 cores)	20%	72	14.3
8	Xen10	Intel Xeon 3.4GHz (4 cores)	20%	4	777MB

### **3- Scope of the Supply & Installation:**

- The Vendor/Supplier shall be responsible for designing, engineering, installation at site, migration, inspection, testing, and documentation. Where the study and design need to be approved by Yemen Mobile engineers within the period of supplying and installation.
- The Vendor/Supplier shall also supply any components/accessories & software/licenses that are not specifically mentioned, but are required to ensure satisfactory functions of the equipment, in accordance with this specifications and documents.
- Tools and equipment required for complete system installation, testing and operation, start-up and operation also should be in vendor scope of supply.
- Supplier must be responsible for the migration and convert process for agreed services from physical environment to virtual environment within agreed and approved plan.
- Installation must include providing all materials ,equipment, accessories, software ,services and tests necessary to complete and make environment ready.

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- All project equipment, installation, cabling and labeling must be supplied and installed in all applicable standards and must be of good quality.
- The Supplier must be responsible for the Provide electricity to all equipment that will be installed from Yemen Mobile sources within standards .
- The supplier is responsible to grantee all environment adapting and provide whatever needed for accomplish this adapting.
- The system proposal must include total pricing for installation, migration, configuration, operation and user training for the complete system.
- The supplier must be responsible for providing any third-party support, equipment or licenses needed.

### 4- **General Term Conditions:**

- The supplier must provide a complete and comprehensive solution with comprehensive & schedule plan before starting operation the systems.
- The system should be provided with the latest stable version of all products.
- The offer should include technical support and product updates or upgrades at least for one year and license keys for ever.
- The full system should provide main and details features as shown in the technical specification.

### 5- **Technical specification:**

#### a) **Blade enclosure**

- The blade must be of high quality brand name from a well-known company.
- The blade must be half-full.
- Remote hardware management must be provided for enclosure/interconnect switch/blade server.
- The enclosure blade must be supported for Raid controller.
- The blade enclosure power and cooling must be fully redundant for full load enclosure.
- The connection ports for uplink and downlink should not be less than 10 gigabit.
- The blade must be included in VMware hardware compatibility list.

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Item	Specs of blade enclosure		Qty	
<b>Brand</b>	High quality brand name		1	
<b>Network interfaces Modules</b>	Redundant interconnect switch support server <b>Converged Network Adapters</b> cards , Ethernet and SAN storage connect , supported for NPIV , apply all the accessories , network cables, transceiver modules, SFP			
<b>Management Application</b>	A powerful Management application with fully remote access + licenses			
<b>Rack specification</b>	<b>Brand</b>	<b>The same as blade Brand or compatible with it.</b>		
	<b>Size</b>	42 U		
	<b>Rack integrated components</b>	Cable management arm.		
		Power distribution units.		
		Fans & air circulator.		
		Rack Mount Pullout LCD Keyboards		
KVM Switch with 12 ports at least				

### b) Server specifications:

Item	Description of Server		Qty
<b>Model</b>	Brand name, Heavy load Model		8
<b>Platform</b>	64-bit windows server base operating system		
<b>Form factor</b>	Blade based		
<b>Processor</b>	<i>Type</i>	<b>Intel Xeon E7-v2 or later</b>	
	<i>Number of CPU</i>	Two	
	<i>Core Number</i>	12 core or higher	
	<i>Intel® Hyper-Threading Technology</i>	<b>Yes</b>	
	<i>Memory</i>	ECC PC3 DDR4	
	<i>Installed</i>	<b>256 GB or higher</b>	
	<i>Support</i>	64-bit memory addressing	

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<b>Hard disk drive (HDD)</b>	<i>Type</i>	SAS hot-swap
	<i>Number Of disk in system</i>	2
	<i>Capacity per disk</i>	<b>1 TB</b>
	<i>RPM</i>	at least 15K RPM
<b>Disk Controller</b>	<i>Hardware Raid Controller</i>	
	<i>Integrated</i>	RAID-0, -1,-5
<b>Network interface</b>	<i>Converge network adapter</i>	Two at least, support NPIV

### c) Storage specifications:

- we can use the same storage for finance system (Oracle ZFS Storage ZS3-2) we need just to add hard disks to expand storage capacity with the following specification:

Item	Specification of Storage
<b>Hard disk</b>	900 GB or higher, 10K or 15K rpm 2.5 inch SAS for Oracle ZFS Storage ZS3-2
<b>Capacity</b>	20 TB total capacity raw at least.

### d) SAN switch specifications:

- SAN switch should integrate with heterogeneous server environment such as (windows, Linux, AIX , virtual server)
- SAN switch ports should
  - support high speed data transfer(2,4,8,16 GB).
  - Have zone capable ,ISL.
  - Must support N\_port\_ID virtualization (NPIV)
- Management tools for traffic measurements & monitor should be provided.
- All needed licenses must be provided.

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Item	Specifications of SAN switch	Qty
<b>Brand</b>	High quality brand name,	2
<b>Type</b>	Rack mountable at least 16 ports fiber optical, ,apply all the accessories ,network cables, transiver modules SFP ,high throughput to be used for virtualization environment.	
<b>Management</b>	Web management tool with dedicated port	

### e) Licenses:

- VMware VSphere Enterprise for 8 server, each server with 2 processors.
- Upgrade for current windows server 2008 enterprise license if needed.

### f) Migration, converting & Installation conditions:

- The supplier is responsible for studying YEMENMOBILE environment by providing any questions to Yemen Mobile engineers before providing the offer to put a scheduled converting plan among best practice in which it guarantees efficient operation.
- The supplier is completely responsible for assuring the accordance of the virtual system with other systems' components working in the network.
- Converting for main systems like CITRIX, AD, FILE SERVER & OTHER systems mentioned above.
- The cost should include the technical support for all components and the supplier will be responsible for renewing the support when Yemen Mobile needs that.

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### 6- Training:

- Cost for 3 engineers external training must be included .
- Training courses:
  - Vsphere administration , Vsphere troubleshooting , vsphere SAN storage administration.
  - Virtual Connect switch administration and troubleshooting.

### 7- Equipment's Warranty

- Guarantees equipment under these specifications.
- The supplier shall be responsible for providing guarantee against defect in materials, devices, equipment, design, and workmanship. If Defect is found, it should be replaced or repaired at Supplier's own cost within the agreed time.
- All systems and components must be provided with an explicit and complete manufacturer warranty of coverage from the date of completed installation and testing.
- Supplier must bring standard warranties for all system's equipment with defined period.
- Technical support and free maintenance for the system and equipment must be within the offer for one year at least , after completion of installation and testing.