

Amendment-3 to "RFP 09/2019-20 dated 20/06/2019 for Supply, Installation, Configuration, Implementation and Maintenance of Hardware, Software and Other items in Canara Bank"

It is decided to amend the following in respect of the above RFP:

a. Submission & Opening of Bid - (Section A-BID SCHEDULE-Page No. 2)

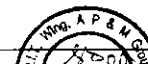
| Description | Existing details | Amended details |
|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | Time & Date | Time & Date |
| Last Date and Time for Submission of Bids | <u>18/07/2019, Thursday upto 3.00pm</u> Venue: Canara Bank, First Floor, DIT Wing-HO (Annex), Naveen Complex, 14 M G Road, Bengaluru 560001. | <u>24/07/2019, Wednesday upto 3.00pm</u> Venue: Canara Bank, First Floor, DIT Wing-HO (Annex), Naveen Complex, 14 M G Road, Bengaluru 560001. |
| Date, Time & Venue for opening of Part A-Conformity to Eligibility Criteria. | <u>18/07/2019, Thursday at 3.30pm</u> Venue: Canara Bank, Second Floor, Conference Hall, DIT Wing-HO (Annex), Naveen Complex, 14 M G Road, Bengaluru 560001. | <u>24/07/2019, Wednesday at 3.30pm</u> Venue: Canara Bank, Second Floor, Conference Hall, DIT Wing-HO (Annex), Naveen Complex, 14 M G Road, Bengaluru 560001. |

| Sl. No. | Page No. | Section/ Annexure/ Appendix of the RFP | Clause No. | Existing | Amended |
|---------|----------|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| a. | 34-42 | Annexure-7 | <u>Functional and Technical Specifications /Requirements for Supply, Installation, Configuration, Implementation and Maintenance of Hardware, Software and Other items in Canara Bank</u> | Annexure-7 (Functional and Technical Specifications /Requirements for Supply, Installation, Configuration, Implementation and Maintenance of Hardware, Software and Other items in Canara Bank) | <u>Amended Annexure-7 (Functional and Technical Specifications /Requirements for Supply, Installation, Configuration, Implementation and Maintenance of Hardware, Software and Other items in Canara Bank)</u> is attached as Annexure. |
| b. | 47-49 | Annexure-14 | <u>Bill of Material</u> | Annexure-14 (Bill of Material) | <u>Amended Annexure-14 (Bill of Material)</u> |

c. Requirement Details (Section-B: Introduction, Clause no. 7.1 on page no. 10):

7.1. Bank invites sealed offers ('Conformity to Eligibility Criteria', 'Technical Proposal' and 'Commercial Bid (Indicative)') for Supply, Installation, Configuration, Implementation and Maintenance of Hardware, Software and Other items in Canara Bank for Data Center (DC) & Disaster Recovery Center (DRC) as per the Terms & Conditions, Technical Specifications and Scope of Work described elsewhere in this document. The brief description of Solution is furnished in following table:



| Sl. No. | Item Details | Quantity |
|---------|---------------------------------------------------|--------------------------------------------|
| a. | <u>Servers and Other Items as per Annexure-7.</u> | <u>53 Servers (30 in DC and 23 in DRC)</u> |



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| b. | Windows Server 2019 Standard OS as per Annexure-7. | 256 quantities of 2-Packs of Core licenses with 03 years of Software Assurance (SA). |
| c. | <u>RHEL 7.5 Enterprise Server Operating Systems standard subscription as per Annexure-7.</u> | <u>41 Nos. of Server License</u> |
| d. | Red Hat OS Cluster Standard Subscription. | 4 (2 in DC and 2 in DRC) |

All the other Instructions and Terms & Conditions of the above RFP remain unchanged.
Please take note of the above Amendments while submitting your response to the subject RFP.

Date: 17/07/2019
Place: Bengaluru


Deputy General Manager




Annexure-7 (Amended)

Functional and Technical Specifications /Requirements for Supply, Installation, Configuration, Implementation and Maintenance of Hardware, Software and Other items in Canara Bank

SUB: RFP for Supply, Installation, Configuration, Implementation and Maintenance of Hardware, Software and Other items in Canara Bank.

Ref: Your RFP 09/2019-20 dated 20/06/2019

Note:

1. The Bidder shall specifically mention the make and model of the items offered for all the requirements in terms of RFP without fail, failing which the Bid is liable for rejection.
2. If the Bidder feels that certain features offered are superior to what has been specified by the Bank, it shall be highlighted separately. Information regarding any modification required in the proposed configuration to meet the intent of the specifications and state-of-the-art technology shall be provided. However, the Bank reserves the right to accept the modifications / superior features suggested/offered.
3. The Bidder shall provide all other required equipment and services, whether or not explicitly mentioned in this RFP, to ensure the intent of specification, completeness, operability, maintainability and upgradability.
4. The selected bidder shall own the responsibility to demonstrate that the products offered are as per the specification/performance stipulated in this RFP and as committed by the bidder either at site or in bidder's work site without any extra cost to the Bank.

A. Technical specifications for Application, Web and Database servers:

1. Technical Specifications for Application, Web and Database servers (8 Nos. at DC and 5 Nos. at DR):

| Sl. No. | Particulars | Detailed Configuration | Bidder's Compliance (Yes/No) |
|---------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| 1. | Make of the Server | Bidder to Specify | |
| 2. | Model of the Server | Bidder to Specify | |
| 3. | Processors | Minimum 2 Socket Processors of 2 nd Gen of Intel Xeon Scalable Processor family with minimum 12 cores per socket, with minimum 24MB Cache and minimum 3.70 GHz Turbo frequency) and should be VT enabled. | |
| 4. | Chipset | Suitable Certified Intel Chipset Compatible With CPU | |
| 5. | RAM | 16GB Per Core DDR4 with 2666 Mhz or higher and upgradable up to least 1TB. | |
| 6. | HDD | Minimum SSD Size of 800GB in RAID 10 Configuration along with one extra disk for fault tolerance. All Disk should be configured in Hot Swappable Configuration | |
| 7. | HDD Bays | 2.5" backplane with minimum 8 drives | |
| 8. | Raid | Minimum 12Gbps RAID controller (RAID 0,1,5,6,10) with minimum 1GB cache | |
| 9. | NIC | Minimum 4Nos of 10GBASE-T Ports and 4Nos of 1GBE for Network Connectivity | |
| 10. | FC HBA | Minimum 4 Nos of 16Gbps FC Host Bus Adapters (HBA) Ports | |

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|-----|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| | | for SAN Connectivity. However all four FC ports should not be part of one quad port PCI Adapter. | |
| 11. | Slots | Minimum 3 PCIe Gen3 Slots | |
| 12. | Form Factor | Maximum 2U rack mountable with rack mount kit and rails | |
| 13. | Ports | Minimum 1 USB, 1 Serial, 1 VGA or higher | |
| 14. | OS & Hypervisor Support | Server should support All Kind of x86 & x86_64 (Windows Server 2016, 2019, Redhat Linux 7 & 8), Hypervisor Support (ESXI & Hyper-V) | |
| 15. | Power Supply | Server should be provided with Redundant hot swappable Power supplies of maximum 1200W. | |
| 16. | FAN | Server should have redundant fully populated Hot swap fans | |
| 17. | Security | TPM 1.2/2.0 optional, Hardware root of trust, Secure Boot, System Lockdown, System Erase | |
| 18. | Drivers & Accessories | Required drivers and accessories to be provided | |
| 19. | Remote Management | Management of hardware and software components, Power on/off, boot process, Management log, dedicated Management ports. Should able to integrate with industry wide KVM solution. | |
| 20. | Server Management | Management software should provide Role Based Security and able to provide pre-failure alarms for CPU, Memory & HDD by SMTP. | |
| 21. | Cables | Minimum 4 Nos of Ethernet cables (minimum 5 meters length) to support 1GBE network traffic, Minimum 4 Nos of Ethernet cables (minimum 5 meters length) to support 10GBASE-T network traffic, Minimum 4 Nos of Fiber Channel Cables (minimum 35 meters length) | |
| 22. | Warranty and Support | 03 Years, Comprehensive, On-Site Support Warranty including part replacement/repairs within 4 hours of reporting, and Software support for updates, upgrades, patches, and bug fixes for supplied s/w from OEM 24 x 7 x 365 days. SSD drives should be covered for irrespective of read/writes on them. In case of Disk failure the faulty disk will be maintained /destroyed by Canara Bank. Proactive storage monitoring & support from OEM should be enabled. The proposed bidder will need to ensure support of product & change of components @ zero cost in case of any part becoming obsolete/EOL & EOS | |

2. Technical Specifications for Application servers (2 Nos. at DC and 2 Nos. at DR):

| Sl. No. | Particulars | Detailed Configuration | Bidder's Compliance (Yes/No) |
|---------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| 1. | Make of the Server | Bidder to Specify | |
| 2. | Model of the Server | Bidder to Specify | |
| 3. | Processors | Minimum 2 Socket Processors of 2 nd Gen of Intel Xeon Scalable Processor family with minimum 8 cores per socket, with minimum 24MB Cache and minimum 3.70 GHz Turbo frequency) and should be VT enabled. | |

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|-----|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 4. | Chipset | Suitable Certified Intel Chipset Compatible With CPU | |
| 5. | RAM | 8GB Per Core DDR4 with 2666 Mhz or higher and upgradable up to least 512GB | |
| 6. | HDD | Minimum SSD Size of 800GB in RAID 10 Configuration along with one extra disk for fault tolerance. All Disk should be configured in Hot Swappable Configuration | |
| 7. | HDD Bays | 2.5" backplane with minimum 8 drives | |
| 8. | Raid | Minimum 12Gbps RAID controller (RAID 0,1,5,6,10) with minimum 1GB cache | |
| 9. | NIC | Minimum 4Nos of 10GBASE-T Ports and 4Nos of 1GBE for Network Connectivity | |
| 10. | FC HBA | Minimum 4 Nos of 16Gbps FC Host Bus Adapters (HBA) Ports for SAN Connectivity. However all four FC ports should not be part of one quad port PCI Adapter. | |
| 11. | Slots | Minimum 3 PCIe Gen3 Slots | |
| 12. | Form Factor | Maximum 2U rack mountable with rack mount kit and rails | |
| 13. | Ports | Minimum 1 USB, 1 Serial, 1 VGA or higher | |
| 14. | OS & Hypervisor Support | Server should support All Kind of x86 & x86_64 (Windows Server 2016, 2019, Redhat Linux 7 & 8), Hypervisor Support (ESXI & Hyper-V) | |
| 15. | Power Supply | Server should be provided with Redundant hot swappable Power supplies of maximum 1200W. | |
| 16. | FAN | Server should have redundant fully populated Hot swap fans | |
| 17. | Security | TPM 1.2/2.0 optional, Hardware root of trust, Secure Boot, System Lockdown, System Erase | |
| 18. | Drivers & Accessories | Required drivers and accessories to be provided | |
| 19. | Remote Management | Management of hardware and software components, Power on/off, boot process, Management log, dedicated Management ports. Should able to integrate with industry wide KVM solution. | |
| 20. | Server Management | Management software should provide Role Based Security and able to provide pre-failure alarms for CPU, Memory & HDD by SMTP. | |
| 21. | Cables | Minimum 4 Nos of Ethernet cables (minimum 5 meters length) to support 1GBE network traffic, Minimum 4 Nos of Ethernet cables (minimum 5 meters length) to support 10GBASE-T network traffic, Minimum 4 Nos of Fiber Channel Cables (minimum 35 meters length) | |
| 22. | Warranty and Support | 03 Years, Comprehensive, On-Site Support Warranty including part replacement/repairs within 4 hours of reporting, and Software support for updates, upgrades, patches, and bug fixes for supplied s/w from OEM 24 x 7 x 365 days. SSD drives should be covered for irrespective of read/writes on them. In case of Disk failure the faulty disk will be maintained /destroyed by Canara Bank. Proactive storage monitoring & support from OEM should be enabled. The proposed bidder will need to ensure support of product & change of components @ zero cost in case of any part becoming obsolete/EOL & EOS | |

3. Technical Specifications for Web servers (2 Nos. at DC and 2 Nos. at DR):

| Sl. No. | Particulars | Detailed Configuration | Bidder's Compliance (Yes/No) |
|---------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| 1. | Make of the Server | Bidder to Specify | |
| 2. | Model of the Server | Bidder to Specify | |
| 3. | Processors | 1 no. Processors of 2 nd Gen of Intel Xeon Scalable Processor family with minimum 8 cores, with minimum 24MB Cache and minimum 3.70 GHz Turbo frequency) and should be VT enabled. | |
| 4. | Chipset | Suitable Certified Intel Chipset Compatible With CPU | |
| 5. | RAM | 8GB Per Core DDR4 with 2666 Mhz or higher and upgradable up to least 512GB | |
| 6. | HDD | Minimum SSD Size of 800GB in RAID 10 Configuration along with one extra disk for fault tolerance. All Disk should be configured in Hot Swappable Configuration | |
| 7. | HDD Bays | 2.5" backplane with minimum 8 drives | |
| 8. | Raid | Minimum 12Gbps RAID controller (RAID 0,1,5,6,10) with minimum 1GB cache | |
| 9. | NIC | Minimum 4Nos of 10GBASE-T Ports and 4Nos of 1GBE for Network Connectivity | |
| 10. | FC HBA | Minimum 4 Nos of 16Gbps FC Host Bus Adapters (HBA) Ports for SAN Connectivity. However all four FC ports should not be part of one quad port PCI Adapter. | |
| 11. | Slots | Minimum 3 PCIe Gen3 Slots | |
| 12. | Form Factor | Maximum 2U rack mountable with rack mount kit and rails | |
| 13. | Ports | Minimum 1 USB, 1 Serial, 1 VGA or higher | |
| 14. | OS & Hypervisor Support | Server should support All Kind of x86 & x86_64 (Windows Server 2016, 2019, Redhat Linux 7 & 8), Hypervisor Support (ESXI & Hyper-V) | |
| 15. | Power Supply | Server should be provided with Redundant hot swappable Power supplies of maximum 1200W. | |
| 16. | FAN | Server should have redundant fully populated Hot swap fans | |
| 17. | Security | TPM 1.2/2.0 optional, Hardware root of trust, Secure Boot, System Lockdown, System Erase | |
| 18. | Drivers & Accessories | Required drivers and accessories to be provided | |
| 19. | Remote Management | Management of hardware and software components, Power on/off, boot process, Management log, dedicated Management ports. Should able to integrate with industry wide KVM solution. | |
| 20. | Server Management | Management software should provide Role Based Security and able to provide pre-failure alarms for CPU, Memory & HDD by SMTP. | |



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| 21. | Cables | Minimum 4 Nos of Ethernet cables (minimum 5 meters length) to support 1GBE network traffic, Minimum 4 Nos of Ethernet cables (minimum 5 meters length) to support 10GBASE-T network traffic, Minimum 4 Nos of Fiber Channel Cables (minimum 35 meters length) | |
| 22. | Warranty and Support | 03 Years, Comprehensive, On-Site Support Warranty including part replacement/repairs within 4 hours of reporting, and Software support for updates, upgrades, patches, and bug fixes for supplied s/w from OEM 24 x 7 x 365 days. SSD drives should be covered for irrespective of read/writes on them. In case of Disk failure the faulty disk will be maintained /destroyed by Canara Bank. Proactive storage monitoring & support from OEM should be enabled. The proposed bidder will need to ensure support of product & change of components @ zero cost in case of any part becoming obsolete/EOL & EOS | |

B. Technical specifications for Application, Web and Database servers (10 Nos. at DC and 10 Nos. at DR):

| Sl. No. | Particulars | Detailed Configuration | Bidder's Compliance (Yes/No) |
|---------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| 1. | Make of the Server | Bidder to Specify | |
| 2. | Model of the Server | Bidder to Specify | |
| 3. | Processors | 2 X Intel Xeon Gold 6130 Processor (16 Core, 2.10GHz Base Frequency, 22 MB L3 Cache) or higher | |
| 4. | Chipset | Suitable Certified Intel Chipset Compatible With CPU | |
| 5. | RAM | 16GB Per Core DDR4 with 2666 Mhz or higher and upgradable up to least 1TB. | |
| 6. | HDD | Minimum usable capacity of 2TB in RAID 5 Configuration along with one extra disk for hot spare. All Disks should be SSD only and also configured in Hot Swappable Configuration | |
| 7. | HDD Bays | 2.5" backplane with minimum 8 drives | |
| 8. | Raid | Minimum 12Gbps RAID controller (RAID 0,1,5,6,10) with minimum 1GB cache | |
| 9. | NIC | Minimum 4Nos of 10GBASE-T Ports and 4Nos of 1GBE for Network Connectivity | |
| 10. | FC HBA | Minimum 4 Nos of 16Gbps FC Host Bus Adapters (HBA) Ports for SAN Connectivity. However all four FC ports should not be part of one quad port PCI Adapter. | |
| 11. | Slots | Minimum 3 PCIe Gen3 Slots | |
| 12. | Form Factor | Maximum 2U rack mountable with rack mount kit and rails | |
| 13. | Ports | Minimum 1 USB, 1 Serial, 1 VGA or higher | |
| 14. | OS & Hypervisor Support | Server should support All Kind of x86 & x86_64 (Windows Server 2016, 2019, Redhat Linux 7 & 8), Hypervisor Support (ESXI & Hyper-V) | |
| 15. | Power Supply | Server should be provided with Redundant hot swappable Power supplies of maximum 1200W. | |
| 16. | FAN | Server should have redundant fully populated Hot swap | |

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| | | fans | |
| 17. | Security | TPM 1.2/2.0 optional, Hardware root of trust, Secure Boot, System Lockdown, System Erase | |
| 18. | Drivers & Accessories | Required drivers and accessories to be provided | |
| 19. | Remote Management | Management of hardware and software components, Power on/off, boot process, Management log, dedicated Management ports. Should able to integrate with industry wide KVM solution. | |
| 20. | Server Management | Management software should provide Role Based Security and able to provide pre-failure alarms for CPU, Memory & HDD by SMTP. | |
| 21. | Cables | Minimum 4 Nos of Ethernet cables (minimum 5 meters length) to support 1GBE network traffic, Minimum 4 Nos of Ethernet cables (minimum 5 meters length) to support 10GBASE-T network traffic, Minimum 4 Nos of Fiber Channel Cables (minimum 35 meters length) | |
| 22. | Warranty and Support | 03 Years, Comprehensive, On-Site Support Warranty including part replacement/repairs within 4 hours of reporting, and Software support for updates, upgrades, patches, and bug fixes for supplied s/w from OEM 24 x 7 x 365 days. SSD drives should be covered for irrespective of read/writes on them. In case of Disk failure the faulty disk will be maintained /destroyed by Canara Bank. Proactive storage monitoring & support from OEM should be enabled. The proposed bidder will need to ensure support of product & change of components @ zero cost in case of any part becoming obsolete/EOL & EOS | |

C. Technical specifications for Application, Web, Entitlement and Database servers:

1. Technical Specifications for Application, Entitlement and Web servers (6 Nos. at DC and 3 Nos. at DR):

| Sl. No. | Particulars | Detailed Configuration | Bidder's Compliance (Yes/No) |
|---------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| 1. | Make of the Server | Bidder to Specify | |
| 2. | Model of the Server | Bidder to Specify | |
| 3. | Processors | <u>1xIntel® Xeon® Gold 5222 Processor (4 Core, 3.80 GHz Base Frequency, 16.50 MB Cache, VT enabled) or higher Should be scalable to 2 CPUs socket</u> | |
| 4. | Chipset | Suitable Certified Intel Chipset Compatible With CPU | |
| 5. | RAM | 16GB Per Core DDR4 with 2666 Mhz or higher and upgradable up to least 1TB | |
| 6. | HDD | Minimum usable capacity of 2TB in RAID 5 Configuration along with one extra disk for hot spare. All Disks should be SSD only and also configured in Hot Swappable Configuration | |
| 7. | HDD Bays | 2.5" backplane with minimum 8 drives | |

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| 8. | Raid | Minimum 12Gbps RAID controller (RAID 0,1,5,6,10) with minimum 1GB cache | |
| 9. | NIC | Minimum 4Nos of 10GBASE-T Ports and 4Nos of 1GBE for Network Connectivity | |
| 10. | FC HBA | Minimum 4 Nos of 16Gbps FC Host Bus Adapters (HBA) Ports for SAN Connectivity. However all four FC ports should not be part of one quad port PCI Adapter. | |
| 11. | Slots | Minimum 3 PCIe Gen3 Slots | |
| 12. | Form Factor | Maximum 2U rack mountable with rack mount kit and rails | |
| 13. | Ports | Minimum 1 USB, 1 Serial, 1 VGA or higher | |
| 14. | OS & Hypervisor Support | Server should support All Kind of x86 & x86_64 (Windows Server 2016, 2019, Redhat Linux 7 & 8), Hypervisor Support (ESXI & Hyper-V) | |
| 15. | Power Supply | Server should be provided with Redundant hot swappable Power supplies of maximum 1200W. | |
| 16. | FAN | Server should have redundant fully populated Hot swap fans | |
| 17. | Security | TPM 1.2/2.0 optional, Hardware root of trust, Secure Boot, System Lockdown, System Erase | |
| 18. | Drivers & Accessories | Required drivers and accessories to be provided | |
| 19. | Remote Management | Management of hardware and software components, Power on/off, boot process, Management log, dedicated Management ports. Should able to integrate with industry wide KVM solution. | |
| 20. | Server Management | Management software should provide Role Based Security and able to provide pre-failure alarms for CPU, Memory & HDD by SMTP. | |
| 21. | Cables | Minimum 4 Nos of Ethernet cables (minimum 5 meters length) to support 1GBE network traffic, Minimum 4 Nos of Ethernet cables (minimum 5 meters length) to support 10GBASE-T network traffic, Minimum 4 Nos of Fiber Channel Cables (minimum 35 meters length) | |
| 22. | Warranty and Support | 03 Years, Comprehensive, On-Site Support Warranty including part replacement/repairs within 4 hours of reporting, and Software support for updates, upgrades, patches, and bug fixes for supplied s/w from OEM 24 x 7 x 365 days. SSD drives should be covered for irrespective of read/writes on them. In case of Disk failure the faulty disk will be maintained /destroyed by Canara Bank. Proactive storage monitoring & support from OEM should be enabled. The proposed bidder will need to ensure support of product & change of components @ zero cost in case of any part becoming obsolete/EOL & EOS | |



2. Technical Specifications for Database servers (2 Nos. at DC and 1 No. at DR):

| Sl. No. | Particulars | Detailed Configuration | Bidder's Compliance (Yes/No) |
|---------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| 1. | Make of the Server | Bidder to Specify | |
| 2. | Model of the Server | Bidder to Specify | |
| 3. | Processors | 1xIntel® Xeon® Silver 4215 Processor (8 Core, 2.50 GHz Base Frequency, 11 MB L3 Cache, VT enabled) or higher | |
| 4. | Chipset | Suitable Certified Intel Chipset Compatible With CPU | |
| 5. | RAM | 32GB Per Core DDR4 with 2666 Mhz or higher and upgradable up to least 1TB. | |
| 6. | HDD | Minimum usable capacity of 2TB in RAID 5 Configuration along with one extra disk for hot spare. All Disks should be SSD only and also configured in Hot Swappable Configuration | |
| 7. | HDD Bays | 2.5" backplane with minimum 8 drives | |
| 8. | Raid | Minimum 12Gbps RAID controller (RAID 0,1,5,6,10) with minimum 1GB cache | |
| 9. | NIC | Minimum 4Nos of 10GBASE-T Ports and 4Nos of 1GBE for Network Connectivity | |
| 10. | FC HBA | Minimum 4 Nos of 16Gbps FC Host Bus Adapters (HBA) Ports for SAN Connectivity. However all four FC ports should not be part of one quad port PCI Adapter. | |
| 11. | Slots | Minimum 3 PCIe Gen3 Slots | |
| 12. | Form Factor | Maximum 2U rack mountable with rack mount kit and rails | |
| 13. | Ports | Minimum 1 USB, 1 Serial, 1 VGA or higher | |
| 14. | OS & Hypervisor Support | Server should support All Kind of x86 & x86_64 (Windows Server 2016, 2019, Redhat Linux 7 & 8), Hypervisor Support (ESXI & Hyper-V) | |
| 15. | Power Supply | Server should be provided with Redundant hot swappable Power supplies of maximum 1200W. | |
| 16. | FAN | Server should have redundant fully populated Hot swap fans | |
| 17. | Security | TPM 1.2/2.0 optional, Hardware root of trust, Secure Boot, System Lockdown, System Erase | |
| 18. | Drivers & Accessories | Required drivers and accessories to be provided | |
| 19. | Remote Management | Management of hardware and software components, Power on/off, boot process, Management log, dedicated Management ports. Should able to integrate with industry wide KVM solution. | |
| 20. | Server Management | Management software should provide Role Based Security and able to provide pre-failure alarms for CPU, Memory & HDD by SMTP. | |



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| 21. | Cables | Minimum 4 Nos of Ethernet cables (minimum 5 meters length) to support 1GBE network traffic, Minimum 4 Nos of Ethernet cables (minimum 5 meters length) to support 10GBASE-T network traffic, Minimum 4 Nos of Fiber Channel Cables (minimum 35 meters length) | |
| 22. | Warranty and Support | 03 Years, Comprehensive, On-Site Support Warranty including part replacement/repairs within 4 hours of reporting, and Software support for updates, upgrades, patches, and bug fixes for supplied s/w from OEM 24 x 7 x 365 days. SSD drives should be covered for irrespective of read/writes on them. In case of Disk failure the faulty disk will be maintained /destroyed by Canara Bank. Proactive storage monitoring & support from OEM should be enabled. The proposed bidder will need to ensure support of product & change of components @ zero cost in case of any part becoming obsolete/EOL & EOS | |

D. Technical Specifications of Software:

| Sl. No. | Software/Operating System | Particulars | Bidder's Compliance (Yes/No) |
|---------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------|------------------------------|
| 1. | Windows Server 2019 Standard edition OS | 256 quantities of 2-Packs of Core licenses with 03 years of Software Assurance (SA). (Total number of Cores are 512) | |
| 2. | <u>RHEL 7.5</u> | <u>41 OS Licenses with 5 Years Standard Subscription</u> | |
| 3. | RHEL OS Cluster Subscription | 4 Nos. with 5 Years Standard Subscription | |

Note: Bidders must fully comply with all requirements. Non-Compliance to any one of the requirements leads to disqualification of the Bidder in Part B - Technical Proposal.

Date

Signature with seal

Name :

Designation :



Annexure- 14

Bill of Material

SUB: RFP for Supply, Installation, Configuration, Implementation and Maintenance of Hardware /Software and Other items in Canara Bank.

Ref: Your RFP 09/2019-20 dated 20/06/2019

Notes

1. These details should be on the letter head of Bidder and each & every page should be signed by an Authorized Signatory with Name and Seal of the Company.
2. Please be guided by RFP terms, subsequent amendments and replies to pre-bid queries (if any) while quoting.
3. Do not change the structure of the format nor add any extra items.
4. No counter condition/assumption in response to commercial bid will be accepted. Bank has a right to reject such bid.

Table -A

Price details of Hardware and Other items in Canara Bank

[Amount in Indian Rupees]

| Sl. No. | Requirement Details | Cost Price | | | AMC/ATS (as per Table C)* | | | Quantity | Total Cost with 3 Years Comprehensive Onsite Warranty and Two Years AMC/ATS after Warranty period (Incl. of tax) | |
|---------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------|-------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------|-----------|------------------------------------------------------------------------------------------------------------------|-------------|
| | | Unit Price with 3 years' Comprehensive onsite warranty and support (Excl. of Tax) | Tax for Column A | | Unit Price with 3 years' Comprehensive onsite warranty and support (Incl. of Tax) | Two years AMC/ ATS charges per unit after warranty period (Excl. of Tax) | Tax for Column E | | | |
| | | | B= % of tax | C= Tax Amt. | | | F= % of Tax | | | G= Tax Amt. |
| A | D= A+C | E | H=E+G | I=D+H | J | K= (IxJ) | | | | |
| 1. | Servers as per Annexure-7-A(1) | | | | | | | 13 | | |
| 2. | Servers as per Annexure-7-A(2) | | | | | | | 4 | | |
| 3. | Servers as per Annexure-7-A(3) | | | | | | | 4 | | |
| 4. | Servers as per Annexure-7-B | | | | | | | <u>20</u> | | |
| 5. | Servers as per Annexure-7-C(1) | | | | | | | 9 | | |
| 6. | Servers as per Annexure-7C-(2) | | | | | | | 3 | | |
| 7. | Total Cost of Ownership for Five years contract period (Sum of column k of rows 1,2,3,4,5 and 6) | | | | | | | | | |

*Year wise breakup of AMC charges should be furnished in Table-D.



Table-B
Price details of Operating Systems Software

[Amount in Indian Rupees]

| Sl. No. | Item Details | Unit Price (Excl. of Tax) | Tax for Column A | | Unit Price (Incl. of tax) | Quantity | Total Cost (Incl. of tax) |
|---------|------------------------------------------------------------------------------------------------------|---------------------------|------------------|------------|---------------------------|----------|---------------------------|
| | | A | B % of tax | C Tax Amt. | D=A+C | | |
| 1. | Windows Server 2019 Standard OS as per Annexure-7(D) with 3 years Software Assurance | | | | | 256 | |
| 2. | RHEL 7.5 Enterprise Server Operating Systems as per Annexure-7(D) with 5 years standard subscription | | | | | 41 | |
| 3. | Red Hat OS Cluster subscription as per Annexure-7(D) with 5 years standard subscription | | | | | 4 | |

Table-C
Total Cost for 5 Years Contract Period

[Amount in Indian Rupees]

| Sl. No. | Details | Total Cost of Ownership [inclusive of tax] |
|---------|-----------------------------------------------------------------------------|--------------------------------------------|
| A | Price details of Hardware & Other Items as per Table-A [Total of Column K] | |
| B | Price details of Operating Systems Software per Table-B [Total of Column F] | |
| C | Total Cost of Ownership [Sum of A and B] | |

Table-D
Post Warranty AMC/ATS Charges year wise for Table-A

[Amount in Indian Rupees]

| Sl. No. | Description | Year wise breakup for AMC/ATS** | | | | | |
|---------|--------------------------------|---------------------------------|--------------------------------|--------------------------------------------------|-------|-------------|--------------------------------------------------|
| | | 4th Year | 5th Year | Total AMC/ATS Changes for 2 Years (Excl. of Tax) | Tax % | Tax in Amt. | Total AMC/ATS Charge for 02 Years (Incl. of Tax) |
| | | AMC/ATS Charges (Excl. of tax) | AMC/ATS Charges (Excl. of tax) | | | | |
| 1. | Servers as per Annexure-7-A(1) | | | | | | |
| 2. | Servers as per Annexure-7-A(2) | | | | | | |
| 3. | Servers as per Annexure-7-A(3) | | | | | | |
| 4. | Servers as per Annexure-7(B) | | | | | | |
| 5. | Servers as per Annexure-7-C(1) | | | | | | |
| 6. | Servers as per Annexure-7-C(2) | | | | | | |

**The Charges mentioned in column "c" of Table-D should tally with the charges mentioned under Price Details in column "E" of Table -A of Bill of Material. The Charges mentioned in column "f" of Table-C should tally with the charges mentioned under Price Details in column "H" of Table -A of Bill of Material.



Undertaking

- i. Bill of material is submitted on the letter head and is signed by an Authorized Signatory with Name and Seal of the Company.
- ii. We confirm that we have gone through RFP clauses, subsequent amendments and replies to pre-bid queries (if any) and abide by the same.
- iii. We have not changed the structure of the format nor added any extra items. We note that any such alternation will lead to rejection of Bid.
- iv. We agree that no counter condition/assumption in response to commercial bid will be accepted by the Bank. Bank has a right to reject such bid.
- v. We are agreeable to the payment schedule as per "Payment Terms" of the RFP.

Date

Signature with seal

Name :

Designation :

