TENDER DOCUMENT FOR SUPPLY OF NETWORK SWITCHES (IT EQUIPMENTS)

TENDER NO: BALCO/SUPPLY//22-23/AS
REF EOI DATED:08th June 2022

Bharat Aluminum Company Ltd.
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INSTRUCTION OF BIDDERS

Vedanta Resources plc **("Vedanta") is a LSE listed FTSE 100 Company with a market cap including that of its listed subsidiaries of about $ 50 billion. We operate across the following core business sectors: Zinc-Lead-Silver, Copper, Aluminum, Iron Ore and Energy, with operation located in geographies spanning India, Australia, UAE, Zambia, South Africa, Namibia and Ireland. Over the past 5 years the group has displayed exemplary appetite for organic and inorganic growth-with an industry leading organic growth program of $ 20 billion nearing completion.**

Bharat Aluminum Company Limited **(BALCO) is a group company of Vedanta in Aluminum business, having its integrated Aluminum complex at Korba, Chattisgarh, comprising an Aluminum Smelter of 245000 TPA with two captive power plants of 270 MW and 540 MW. BALCO is also in process of putting up an additional power plant of 1200 MW and 650000 TPA Aluminum smelter.**

What BALCO is looking forward with this Vendor:-

- High Level of Service quality.
- 100% adherence to all the deliverables.
- Zero accidents environment.
- 100% reporting of all the near miss incidents and corrective measures for all to ensure no accident due to the unsafe conditions.
- Increased availability of all the equipments and the total system to ensure better efficiency and higher levels of productivity.
- Ensuring higher productivity per man hour by introducing better Operating Procedures.
- Introduction of innovative ideas which can save in terms of time or money.

Information / Credential of Suppliers…..

The following information is Compulsory and should be furnished completed in all aspects along with your offer.

1. Brief history of organization, along with organization chart, mentioning the Name, Designation & Tel.Nos of the contact persons in your company holding all key positions.
2. Client list, with copies Contracts of your Top 5 clients.
3. Banker's name and your Company's annual audited report / Balance Sheet for last 2 years.
4. The details of Machinery and Equipment available with you which are in working condition are to be furnished.
5. If the space provided in the registration form is not sufficient, please attach separate Sheets and give Annexure reference number on the attached sheet.
6. Registration Details

   a. Registration No. and date
      (Kindly attach a photocopy of registration certificate)

   b. Membership to any body

   c. Any other Statutory Registration.

   d. Registration details with taxation authorities:

      i) Permanent Income Tax A/c No.

      ii) Service tax Registration
      iii) Tin Number
      iv) Excise registration no.
      v) LST & CST no.

ANNEXTURE I
BALCO'S GENRAL TERMS AND CONDITIONS TERMS:
1.   Price:
   Price quoted should be inclusive of Freight & Transit Insurance i.e. F.O.R. Balco Door Delivery basis.
 2.   Taxes & Duties:

Only GST Tax will be paid extra at actual,

3. **Delivery Period :**
   Delivery period should be offered on the basis of actual manufacturing time and transit time required to deliver the material at our stores.

4. **Payment Terms:**
   Payment will be released within 30 days after receipt & acceptance of material at our store site.

5. **Acceptance of Offers:**
   BALCO is not bound to accept the lowest offer or to give any reasons for rejection of any offer and it shall be the sole discretion of the company to consider or reject any bid. A formal Purchase Order shall be issued by BALCO towards the successful bidder in the event of acceptance of the offer. Unless a formal Vendor has been concluded no offer shall be deemed as accepted. Balco reserves the right to award Order to more than one agency or split the order at its own discretion.

6. **Modification & Agreement:**
   BALCO shall have the right to modify the ordered quantity in view of variation of requirement, price increase / decrease. Modification of Agreement may also take place in Vendor period as it may be shortened or extended in proposition to our supply pattern as we full depend on our Vendor's commitments.

7. **Damage To Balco's Property:**
   Any loss / damage to Balco due to negligence or willful attitude of the supplier or his employees while execution of the supplier shall be recovered from the Vendor are pending bills.

8. **Occupational Health & Safety**:
   The vender shall be responsible to take all precautions to ensure safety of the labors / workers at work. The vender will supply his labors / workers safety equipment as per rules. If you're bringing your own equipment to carryout of job inside the plant such equipment should be subject hazard identifications and risk assessment prior to commencing of work.
   The persons engaged by you shall be given appropriate awareness on OH&S; those personal who will carry out jobs affecting OH&S shall be properly trained and made competent for the job performed by them. During emergency situation which may be faced in the plant your personal should move to the emergency shelters. They should not lighter around nor spread any rumor.

12. **Indemnity:**
   The Vendor shall keep Balco indemnified from and against all actions, suits, proceedings, losses, costs, damage, claim and demands of every nature and descriptions due to any acts of the Vendor.

13. **Insurance**:
   The will take workmen compensation insurance policy from the Insurance Company so as to enable him to discharge various liabilities under workmen compensation act and submit documents within seven days of its start of work. The Vendor shall be required to obtain Group Insurance Policy for the labors to be engaged in the work.

14. **Illegal Gratification:**
   This Vendor can be terminated if any bribe, commission, gift or advantage given, promised or offered by the Vendor to any employee of Balco.

15. **Liquidated Damage:**
   Delivery time is the essence of contract, delivery beyond the contractual delivery terms shall entall Liquidated Damage (LD) @ 0.5% per week of the Total Order value and maximum to an extent of 5% of the Total Order Value.

17. **Force Majeure**:
   For failure of delivery of material due to war, restraint, imposed by government, earthquake, fire, explosion, riot, lockout, etc, beyond human control directly interfering with the work, Balco shall only allow such additional time as may be considered justified by the circumstances of the case. No claim whatsoever of compensation from the Vendor for loss etc. on this account shall be entertained. Direct or indirect loss, if any, to Balco due to negligence of the Vendor during this period, on this account can however be recovered from the Vendor.

18. **Arbitration:**
In case of any dispute or difference between the Parties the matter shall be decided by mutual negotiation & agreement. If any difference persists on a matter of law or interpretation of this document the decision of mutually appointed arbitrator would be final & binding. All disputes arising out of or in connection with the present Vendor shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce by one Arbitrator appointed in accordance with the said Rules. The Contract shall be governed by, construed and interpreted in accordance with the laws in India. The venue of Arbitration shall be at Korba India only. The Arbitration shall be held in English language and the award of the Arbitration shall be final and binding to both the parties.

27. **Jurisdiction:**
This Vendor will be subject to Korba, Chhattisgarh Jurisdiction only for all legal matters.

Annexure 1.

Scope Of Work: Network Hardware Refresh

1. Purpose

Upgradation of Active Network Component to have a secure backbone of Network Equipment updated with latest security patches.

Upgradation for Addressing the scalability and flexibility & Bringing more ease in designing network connectivity.

The current deployment will support cloud and 5G technology and ensure cyber security.

To create an environment which must have a sustainability road map for at least 10 years complying to all regulatory and statutory norms from time to time.

2. Technical Scope

The Scope of Network Upgradation should be complete in all aspect to plan, successfully implement and provide support for Network Equipment. In addition, it should have capabilities for central management and monitoring. The Detail Technical Scope is as follows:

2.1 Feature to be Included but not limited to the below:

Recommended Solution must have below mentioned features:

Security Controls	Minimum Baseline Security Standards	HA for Critical Equipment
Prevention of Known threats	QoS in LAN Traffic - Application Traffic Shaping	Central Management Console

Central Backup & Patch Management	RADIUS/TACACS Authentication, 2 Factor Authentication	Logging & Reporting

2.2 Scope of Work Summary:

1. Vendor must propose a Solution recommendation for upgradation of active component, which is flexible, scalable and Secure & improvement of passive component (to support at least 10 Gbps Bandwidth) which provide the platform for integration of all components and support past investment, also protect future expected/unexpected investment.

   Core – Distribution – 10 GBPS
   Distribution – Access – 1 GBPS

2. Vendor must propose a Solution which provide greater visibility and produce outcome-based findings & design that increase the PRODUCTIVITY not the COMPLEXITY.

3. Vendor Suggested Solution must result Greater Performance with Automation, Analytics & Assurance but keep the Security at core of the design.

4. Solution should have Predictive performance with deterministic latency for all user and workload. Solution should be designed to have a sustainability for Industrial Environment with dusk & temperature.

5. Vendor must ensure criteria defined but not limited to Security Design Considerations.

6. Vendor must ensure proper configuration of devices as per latest routing protocol technology and proper Segregation of Network.

7. Vendor must ensure proper configuration of devices as per recommended Security Standard and protection of all known variabilities in Network.

8. Access layers switches placement to be done based on limiting the cascading and having direct uplink to distribution switches. In case where DS switches can't be reached due to no direct fiber path, a Ring need to form between the access switches to have redundant path.

9. Distribution (HA) to Core (HA) –minimum 10G Redundant Active Link -10G Speed (minimum) at full duplex. Vendor may plan to increase the Distribution (not more than 3 points) Switches with proper justification.

10. L3 Interface (VLAN SVI) to be created to each zone Core Switches, hence no routing protocol is required between DS and Core of each zone.

11. All the zone Core switches run dynamic routing protocol to share the VLAN database

12. Manual sponsored guest access is to be provisioned and guest should be permitted to access Internet only.

13. Necessary accessories while replacing old Network equipment with New Equipment will be in Vendor Scope.

14. Vendor has to ensure 100% network available for end users/end devices as previous for all the access layer equipment after replacement.

15. If shared equipment does not come with Surge Protector, then same to be included as a separate line item. Technical Specification to be shared.

16. 5 Years Hardware Support to be included with Assurance to operate in same infrastructure for at least 10 years.

17. Include safety stock for Critical Network Equipment in case of Hardware failure.

18. SOP for Monitoring / Incident Handling (Resolution Timeline, Type of incident included/excluded in Service Uptime) / Spares Replacement Cycle to be shared with Proposal.

19. Delivery Timelines, Implementation Timelines & Any Prerequisite to be shared with Proposal to BALCO.

20. KPI/Milestone Based Payment for Project Execution.

21. Inclusion / Exclusion of Scope

22. Any Regulatory Compliance required from BALCO Side to be shared with Proposal.

2.3 Scope of Work Details:

Planning & Designing

Bidders has to Plan and Design the Migration project plan with BALCO Team, in the planning phase Bidder has to be identify the roles and responsibilities and set the timelines for execution while addressing the plan to mitigate current challenges.

Bidders has to be submit the timeline to perform the planning and designing phase with customer in 2 weeks of time.

High level Design (HLD)

Partner shall be responsible to provide the inputs to HLD as required and guided by BALCO team.

Partner shall also make amendments to HLD if required and take a sign off from the BALCO Process team.

Partner will also make sure that BALCO has direct access to its teams (local or international) who will be engaged in this project from design to deployment.

The HLD will necessarily also highlight how the user login would happen considering solution diagrams, hardware / network diagrams, network and platform interfaces, system flows, BCP considerations, Risks /Capacity Planning.

Low level Design (LLD)

Partner shall be responsible to provide the inputs to LLD as required and guided by BALCO team with a high signal strength for critical areas/users.

Partner shall also make amendments to LLD if required and take a sign off from the BALCO Process team.

Partner shall ensure that the initial draft of the solution - LLDs will have a detailed view of the solution design with infrastructure and the Use case Applications and will also cover a detailed view of the integration with the BALCO IT systems/ landscape.

Implementation

The following table provides a high-level description of the tasks and deliverables for this project

1	Project and communication plan	BIDDER and BALCO	
2	Current equipment BOM and hardware availability verification. Site readiness verification	BIDDER and BALCO	
3	Power, Cooling, Spacing	BALCO	
4	Cabling layout and Connectivity Verification	Bidder and BALCO	
5	Device to Device Inventory	BIDDER and BALCO	
6	Back up of Device and Application	BALCO and	Re-

		BIDDER	verification
7	Implementing of Solution – As per Plan	BIDDER	
8	Documentation of Procedure	BIDDER	
9	OEM/ Support Team	BALCO and OEM	
10	Phase Wise migration and integration plan	BIDDER	
11	OS Upgradation and POST of new device	BIDDER	
12	Device to Device Connectivity	BIDDER	
13	Troubleshooting in Integration	BIDDER	
14	Responsibility if Integration with Voice, Wireless and Application (AD/Firewall/SIEM etc)	BIDDER	
15	Handover with UAT	BIDDER and BALCO	
16	Resident Engineer for post implementation support	BIDDER	

Partner will perform the implementation of this solution at BALCO Plant, Township and Branch Offices.
Partner will detail the BoM & costs for implementing the solution (the specifications of which are captured in the Functional Requirements).

Partner will confirm the build has been successfully completed in accordance with the solution HLDs.
Partner shall configure and test all application development.

Partner shall integrate all third-party software and websites related to the project.

Partner should be able to manage the go-live timelines as well as achieve the seamless integration with IT systems and realize all the customer use cases.

Partner shall ensure that the solution should support phase wise integration with BALCO IT Systems.
Partner has to provide complete migration plan from existing network to proposed network architecture with required and guided by BALCO team

Migration Plan

A detailed migration plan- A proper plan would be documented during the design phase of the project in coordination with the Project stakeholders.
Site Survey – Site survey of existing site will be documented with pin size detail
Back of devices – The lasts backup and verification must be done.

Rack Layout - Rack Layout of existing setup must be documented to freeze the positioning of new devices

Documentation of procedure for each device config migration and integration with minimum impact on services.

Inventory detail for device to device placement and connectivity.

Each Device will be dismounted from existing racks and packed on separate box with labelling.

For any risk in movement or any damage management is partner responsibility.

Deployment and Customization

Partner shall provide enough qualified resources for deployment, integration and commissioning of the solution as per agreed Project Schedule. The resources should be in roles of the partner's entity.

Partner is responsible for end to end deployment and customization as per BALCO requirements.

Partner is responsible for the System Integration for all scope modules and third-party applications.

Deployment Feasibility Check in DC.

Team Mobilization for the commencement of the work.

Before the initialization of the work a complete schedule will be provided to BALCO in the form of a Project Plan.

Weekly track report would be given to BALCO (with Milestones achieved and Weekly Project Status Report) by end of every week for acknowledgement and review.

Quality control document for different modules implementation should be prepared by partner.

Integration services will also include create any script, adapters or connector required for integration with third party applications.

Partner shall provide the BOQ for the total solution.

Partner shall be responsible for integration of complete solution in BALCO ecosystem.

Partner shall ensure that the solution should be tested end to end before it is handed over to BALCO team.

Integration

Partner shall study and analyse BALCO ecosystem and come up with integration strategy of solution in a non-disruptive manner and at the same time making sure that full IT landscape is in sync and no overlaps take place.

Governance

The partner in concurrence with BALCO and any assignees of BALCO shall jointly lay down the Governance Process and execute the process for managing a time bound, quality project delivery as per Global benchmarks.

The partner should develop an integrated process for the end to end solution to be deployed and managing the overall project.

The partner in concurrence with BALCO will develop a mechanism to socialise the program and develop materials for high visibility of the project with achievements and meeting success criteria.

The Partner shall ensure that all activities shall adhere to the governance, security, legal, and regulatory framework defined by BALCO and amended from time to time as per the changing needs

 The partner should abide by the agreed responsibility matrix developed in due course.

Knowledge Transfer & Training

Partner will provide knowledge transfer workshops to BALCO team.

Partner will provide Product Admin Certification to BALCO Team (At least 2)

Scalability and Modularity

Partner shall ensure that the proposed solution architecture needs to be scalable to meet future demand and provide enough levels of security and interoperability.

Partner should plan to meet the user loads based on the business projection provided.

Partner should ensure that the Solution should be modular so that individual modules can be enabled / disabled based on requirements

Legal and Regulatory

Partner shall ensure that all activities be adhere to the governance, security, legal, and regulatory framework defined by BALCO.

Data Privacy

Partner should maintain the data privacy of the systems used and solution deployed.

Partner shall ensure that the client solution details and transactions should not be passed to other clients.

Partner shall ensure that the saved user data should be encrypted and should be accessed by authorized personal using secured user credentials

Business Continuity Planning and Backup

Partner should ensure the DR plan, to sustain entire coal supply chain system if primary setup goes down or doesn't works should maintain the data privacy of the systems used and solution deployed.

Partner shall ensure that the solution should also support integration with BALCO existing backup solution as appropriate.

Partner should provide details of BoM required to support archival and backup, as applicable.
Partner shall ensure that the solution should support archiving facility with defined BALCO archiving policy. The solution should support appropriate restoration setups and procedures.

Technical Compliance

1	Access Switch - 8/16/24/48 Port		
S. No.	General Specifications	Compliance (Yes/No)	Remarks
1	General Features:		
1.1	Switch should be 1U and rack mountable in standard 19" rack.		
1.2	Switch should meet the requirement for building up BALCO New Architecture design		
1.3	Switch should must be the latest or new series of switches with better feature set and new architecture of Operating system. All the switches proposed must have same OS architecture.		
2	Performance:		
2.1	Switch must have Line Rate based Architecture		
2.2	Switch shall scalable and modular architecture to provide the enhance performance		

2.3	Switches must be able to deliver 100% of functionalities - licenses and Subscription model has to be defined from day1			
2.4	Switches must have Dedicating Stacking Port (LINE RATE), must have redundant option for Power Supply, FAN unit etc			
2.5	Switches must comply to full POE+ capabilities where its required			
3	Functionality:			
3.1	Proposed switch must be L2/L3 capable switch			
3.2	Switch must have functionality supporting L3 Protocols including static routing, PIM, OSPF, VRRP, PBR and QoS features from Day1			
3.3	Switch must support the advance Security protocols including secure boot process and there must not be any compromise on security of devices as well			
3.4	Switch must be able to integrate with existing Voice and Network Access Controller system			
3.5	Switch should support 802.1x authentication and accounting, IPv4 and IPv6 ACLs and Dynamic VLAN assignment and MACSec-128 on hardware for all ports.			
4	Interfaces			
4.1	8/24/48G User port + Minimum 2 10G SFP+ Uplink Ports			
4.2	Switch with POE+ capability, must provide Full POE+ Functions			
5	Certification:			
5.1	Switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.			
5.2	Switch shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.			
5.3	Switch / Switch's Operating System should be tested for EAL3/NDPP or above under Common Criteria Certification.			
2	Distribution and Core Switches - 24/48 Port			

S. No.	General Specifications	Compliance (Yes/No)	Remarks
1	General Features:		
1.1	Switch should be 1U and rack mountable in standard 19" rack.		
1.2	Switch should meet the requirement for building up BALCO New Architecture design		
1.3	Switch should must be the latest or new series of switches with better feature set and new architecture of Operating system. All the switches proposed must have same OS architecture.		
2	Performance:		
2.1	Switch must have Line Rate based Architecture		
2.2	Switch shall scalable and modular architecture to provide the enhance performance		
2.3	Switches must be able to deliver 100% of functionalities - licenses and Subscription model must be defined from day1		
2.4	Switches must be proposed with HA (as per BALCO Requirement for Specific Areas)		
3	Functionality:		
3.1	Proposed switch must be Fully L3 capable switches supporting all required L3 Protocols		
3.2	Switch must have functionality supporting L3 Protocols including static routing, PIM, OSPF, VRRP, PBR and QoS features from Day1		
3.3	Switch must support the advance Security protocols, encryption capabilities including secure boot process and there must not be any compromise on security of devices as well		
3.4	Switch must be able to integrate with existing Voice and Network Access Controller system		
3.5	Switch should support 802.1x authentication and accounting, IPv4 and IPv6 ACLs and Dynamic VLAN assignment and MACSec-128 on hardware for all ports.		
4	Interfaces		

4.1	1/10/25Gig based 24 or 48 port (Downlink Port) + Minimum 4 number of Uplink port of 40/100Gig		
5	Certification:		
5.1	Switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.		
5.2	Switch shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.		
5.3	Switch / Switch's Operating System should be tested for EAL3/NDPP or above under Common Criteria Certification.		
3	Function Requirement for Monitoring and Management System		
S No.	Central Management System - Controller	Compliance (Yes/No)	Remarks
1	Controller should provide central management from single dashboard, device lifecycle management like device discovery, topology, inventory, image upgrade for both for wired and wireless networks		
2	Controller should support multiple application to solve business problem like end to end path trace, automated end to end QoS deployment in the network		
3	Automated provisioning of layer-3 routed access layer design for access switches		
4	Controller should able to integrate with NAC solution to provide integrated security with SD-LAN		
5	Controller should able to integrate with external services like DHCP, DNS, SNMP, AAA servers		
6	Controller should able to collect real time telemetry data from syslog, SNMP, flow etc. and should provide end to end visibility, network time travel, proactive and predictive information for troubleshooting		
7	Controller should provide following management and visibility capability:		

8	Network and user health with top 10 issues		
9	Client health summary, Client on boarding in wireless, RF details, history of performance of each client device		
10	Capability to view historical events to check network status when issue occurred		
11	Troubleshooting issue along network path, checking if ACL, QoS affecting connectivity or performance issue		
12	Controller should support REST APIs to share data with third party applications		
13	Controller should have redundant power supplies and local storage		

Compliance of Service levels

The Partner is responsible for overseeing the compliance of the following SLA parameters as per solution architecture, Testing, Go-Live and 5 Years post Go-live (HARDWARE & LICENSING).

Online/Real time Reports available on the solution for BALCO to view & download.

Immediate Alerts (Email, SMS, Web, App) from the device to the platform and to necessary authorities.

Service Performance:

Network Response from all Access switches to Core must be less than 1 ms.
End user ports must be minimum 1 Gbps, with PoE available for all access ports.
ACCESS-DS must have minimum 1 Gbps or more Bandwidth, DS-DS/CORE must have 10 Gbps or more Bandwidth.
Equipment installed must have a less than 60% CPU & Memory Utilisation when all ports are connected & are in use.
Zero impact on performance related to Dust or Temperature.

Product Performance:

Product should conform to all compliances and functionalities as will be signed off between BALCO and the partner. In case of deviation within 12 months (term of warranty) the same will need to be replaced/repaired to concurred level of performance and quality. In case of any performance deviations, the partner will be solely responsible for refunding the full amount of product and implementation services without any preconditions.

KPI/Milestone Based:

Delivery of Materials:

100% if Materials received within defined timelines.
LD as per Commercial Terms & Condition.

Hardware Installation:

100% if HARDWARE installation & configuration 100% completed within defined timeline.
5% Deduction if Completion extended timeline is not more than 1 Weeks.
10% Deduction if Completion extended timeline is not more than 2 Weeks.
20% Deduction if Completion extended timeline is not more than 4 Weeks.
50% Deduction if Completion extended timeline is not more than 8 Weeks.

Else 100% Deduction.

Signed Off:

Vendor Compliances

The partner is responsible to conform the following compliances related to all other participating partners (supplier) for the solution delivery, maintenance and support.

Partner/ MSI must comply to BALCO Commercial terms & conditions.

Partner/ MSI must comply to BALCO HR, Safety, Health and Security policies/ guidelines.

Partner/ MSI must comply to BALCO IT compliances, process and security policies/ guidelines.
In addition to above points, other statutory norms of Factory/IT/HR/Safety/Security to be followed during execution of project.

Vendor has to ensure all HR, Safety & Security Compliances for the Resources deployed during Implementation and Service Period.

Supplier should have all the mandatory licenses to sell products and services in India, as laid by the Indian Tax and company Registration policies

Supplier should provide the complete suite of components required by BALCO for the solution
End Devices (with warrantee, certifications, etc.), and all solution components (with Warrantee and AMC)

Supplier should submit the registered names, addresses and SPOC contact numbers of the organizations which the supplier intends to partner with for this project. Supplier should be apprised that while it needs to be the prime bidder for this RFP, it needs to

share the details of any OEM, ODM, Secondary Vendor, Secondary Suppliers, System Integrators or Application Providers it intends to partner with. Also Supplier needs to guarantee SINGLE Billing, Delivery, Logistics and Service support for the overall solution to BALCO.

Supplier should have TEC approval for the end devices to be used by BALCO. The certificates, as issued to the vendor or its empanelled OEMs/ODMs/secondary suppliers/secondary vendors, should be submitted to BALCO post self-attestation by the Supplier

Licensed versions of the solution components

Licensed versions of any other software required for the proper functioning of desired solution

Details of any cloud hosting of any solution component

Backhaul connectivity (as approved by BALCO) to connect the infrastructure hosted for BALCO

End to end security of the hardware and software, cloud deployed for the solution

Demonstrable Security measures on the end to end Product construct including end devices, applications and data/device signalling

End to End Service Delivery and Assurance (remote and on field)

All required warrantee, guarantee, AMC, licenses etc. to ensure seamless and hassle-free functioning of solution

Supplier should have certified engineers specifically on solution and its necessary components based out of India

Supplier should have service delivery capabilities and should have service centres across India

Supplier should have strong India presence in terms of deployment and support required for the solution.

Supplier should have strong understanding of Coal Logistics, Procurement, Quality and IT and telecom network

Supplier needs to submit the relevant documents supporting its registration in the locations as per BALCO requirements

Supplier should have experience in Logistics domain (Commercial & Railways) in India along with reference of Mission Critical Digital deployment anywhere across the world. Supplier should submit a proof and active customer reference to BALCO for verification. Non-compliance to this clause will lead the vendor to contract cancellation with BALCO

Supplier should submit the RACI Matrix for applications deployment and operations along with the Governance structure

Supplier should share the detailed Program Structure and Project plan for the deployment and operations, while responding to the RFP

Supplier should submit the readiness of features asked in the RFP categorized as

a. Customization requires a change request. Supplier should also submit the degree of change in terms of
b. Costs
c. Chargeable to BALCO

d. Free of Cost
Deployment timelines

Impact assessment in terms of simple, medium and complex – Supplier should describe these three impacts as well

Governance model of the change request

Configuration: requires enablement of features already available in the solution proposed without any additional costs to BALCO and maximum implementation timeline of 1 week from the date the configuration request is shared to Vendor

Detailed Bill of Material (including physical and virtual servers/ infrastructure requirements in terms of server/storage/network/databases/backups) to be shared by the Supplier to BALCO while responding to the RFP.

Submission Guidelines:

Partner/MSI must submit following details during proposal submission.

Organization background & Profile
Domain Expertise w.r.t RFP
Technical Skills and Expertise of Manpower
References of similar implementation

3. Project Deliverable:

The deliverables for the projects will be as follows (but not limited to):

 Detailed Project Plan
- Business Blueprint (including Data / Business Architectural Design, Technology / Landscape Design, "As-is" and "to-be" status document, Integration Design)
- Functional Specification (Preliminary / Final)
- Technical Design Specification (Preliminary / Final)
- User Manual
- Training Manual
- Support and Sustenance

Microsoft Active Directory will be integrated with NAC to provide backend directory services for user credentials.

Printers, scanners, CNC, robots, CCTV, etc. will use MAB authentication.

NAC to be configured with policies to authorize users based on AD groups.

Contractors, consultants and auditors will be authenticated via AD (Two Factor Authentication). Upon successful authorisation, these users will be allowed restricted access to resources.

Manual sponsored guest access is to be provisioned and guest should be permitted to access Internet only.

Posture assessment and remediation will be carried out using SCCM as a reference and remediation point. In Absence of SSCM alternative to be arrange.

Profiling will be based on DHCP, SNMP & Device sensor probes.

Annexure 2. BOQ

Part Number	Smart Account Mandatory	Description	Service Duration (Months)	Qty	Unit Price	Total price	HSN/SAC	GST
Access layer Switches								
C9300L-24P-4G-E	-	Catalyst 9300L 24p PoE, Network Essentials ,4x1G Uplink	---	77				18%
GLC-LH-SMD=	-	1000BASE-LX/LH SFP transceiver module, MMF/SMF, 1310nm, DOM	---	160				18%
Server Farm Switch								
C9300L-48T-4X-E	-	Catalyst 9300L 48p data, Network Essentials ,4x10G Uplink	60	4				18%
CON-SNT-C9300L4E	-	SNTC-8X5XNBD Catalyst 9300L 48p data, Network Essenti	60	4				18%
SFP-10G-SR-S=	-	10GBASE-SR SFP Module, Enterprise-Class	---	16				18%
Distribution Switches								
C9300-24S-A	-	Catalyst 9300 24 GE SFP Ports, modular uplink Switch	60	10				18%
CON-SNT-C930024A	-	SNTC-8X5XNBD Catalyst 9300 24 GE SFP Ports, modular u	60	10				18%
GLC-LH-SMD=	-	1000BASE-LX/LH SFP transceiver module, MMF/SMF, 1310nm, DOM	---	240				18%
SFP-10G-LR-S=	-	10GBASE-LR SFP Module, Enterprise-Class	---	20				18%
Core Switch								
N9K-C93360YC-FX2	-	Nexus 9300 w/ 96p 1/10/25G, 12p 100G, MACsec capable	60	2				18%
CON-SNT-N9KC933F	-	SNTC-8X5XNBD Nexus 9300 with 96p 10/25G SFP+, 6p 100G	60	2				18%
Wireless AP								
CBW140AC-D	-	CBW140AC 802.11ac 2x2 Wave 2 Access Point Ceiling Mount	---	400				18%
SW-CBW-APAC-K9	-	Cisco Business Access Point Software	---	400				
CCTV Switch								
C1000-24FP-4G-L	-	Catalyst 1000 24port GE, Full POE, 4x1G SFP	---	30				18%
CAB-IND-10A	-	10A Power cable for India	---	30				
GLC-LH-SMD=	-	1000BASE-LX/LH SFP transceiver module, MMF/SMF, 1310nm, DOM	---	60				18%
		TOTAL PRICE				**0**		