

No. EI-D/Tech/18-43/2012

ERNET India


(An Autonomous Scientific Society under Department of Information technology, Gol)
Jeevan Prakash Building, 10th Floor,
25, K.G Marg,
New Delhi-110 001

Dated:-17.12.2012

Subject:- Invitation of Bids for Empanelemnt of a Vendors for IPv6 Training & Consultancy Services – reg.

Kindly refer to the advertisement appeared in Times of India dated 15.12.2012 regarding the subject matter.

2. In this regard please find enclosed a tender document for taking further necessary action in the matter by the prospective bidders.



(Dinesh Kumar Dixit)
Registrar & CPO

To,

All the prospective bidders

Tender Document for Empanelment of a Vendors for IPv6 Training & consultancy services

No. EI-D/Tech/18-43/2012

ERNET India

(A Scientific Society under Department of Electronics & Information Technology, GoI)

10th Floor, Jeevan Prakash Building,

25 K.G.Marg,

New Delhi - 110 001

Dated: 17.12.2012

TENDER DOCUMENT

Issue of Tender Document: 17.12.2012

Receipt of Queries Upto: 27.12.2012

Response to Queries** : 03.01.2013 (on ERNET Website only):

Due Date: 10.01.2013 at 3.00 P.M

Opening of Bids: 10.01.2013 at 3.30 P.M.

Subject : Invitation of Bids for **Empanelment of a Vendors for IPv6 Training & consultancy services** – reg.

Sir,

1) **ERNET India**, an Autonomous Scientific Society under Department of Electronics & Information Technology, Ministry of Communications & Information Technology, Govt. of India, is a Class 'A' Internet Service Provider for the Education and Research community in India.

2) **ERNET India** is a nodal agency for integrating and providing ICT services to the education & research institutions in the country and other govt. Institutions.

3) ERNET India intends to enter into "Rate Contract" through empanelment of reputed organization for assisting ERNET in imparting training on IPv6 and providing consultancy services for migration to IPv6 wherever required.

4) The Scope of training & consultancy are specified in **Annexure –I**. Interested parties who wish to bid may collect Tender Document in person against a Demand Draft or Banker's Cheque of Rs.2,000/- drawn in favor of "**ERNET India**", payable at New Delhi from Shri

Tender Document for Empanelment of a Vendors for IPv6 Training & consultancy services

Gulshan Kumar, Section Officer, ERNET India before the bid submission date as given above. The Tender Document can also be download from www.ernet.in under Tenders. In such case, an amount of Rs.2,000/- in the form of Demand Draft/Banker's cheque drawn in favour of ERNET India would be required to be furnished along with the **Cover for Technical Specification** of the bid. Non-submission of tender fee would be treated as non-responsiveness and bid will not be taken up for consideration.

- * Any inquiries regarding clarification/interpretation/contents in connection with this Tender should reach in writing only to Registrar & CPO, ERNET India at the address given above on or before the time stipulated above. Any queries received after the stipulated date & time will not be entertained. The prospective Bidders must have acknowledgement of all inquiries/queries submitted.
- ** Response/reply to Queries/clarifications received within time frame as stated above shall be uploaded at ERNET India website at www.ernet.in. No reply in this regard shall be sent to individual bidders. Bidders are advised to visit ERNET India Website to get the details in this regard, if any, before submission of their bids on the due date/time.

The following instructions should be carefully noted:

5) ELIGIBILITY CRITERIA

- i) The bidder should be ISO 9001:2008 for Training and 27001:2005 for consultancy services Certified Company.
- ii) The Bidder should have been in the business of IT Trainings/consultancy for at least past 3 years. The Bidder shall submit the declaration duly signed and stamped by Bidder's authorized signatory regarding these along with the documentary proofs in the bid.
- iii) The bidder should not have been blacklisted from any Govt. organisation across India in last three years and undertaking in this regard should be provided by the authorized signatory of the bidder.
- iv) The bidder should have annual turnover of atleast Rs. 20 Crores each year during the last three financial years. Attested & audited copies of the company's annual reports for the years 2009-10, 2010-11 and 2011-12 have to be attached along with the bid, duly certified by the Chartered Accountant. The Bidder should be profit making company in last three year with positive net worth.

- v) Attested copies of Articles of Association (in case of Registered firm), Byelaws and certificates of registration (in case of registered co-operative Societies), partnership deed (in case of partnership firm) should be submitted.
- vi) The bidder should have an office in NCR.

Apart from above mentioned conditions, bidders need to meet the following criteria :-

5.1 IT TRAINING:

1. The bidder should have a minimum of 15 training staff on rolls of the company out of which atleast 5 should be IPv6 certified and posted in India.
2. The bidder should submit atleast 1 Purchase order from government department / PSU for imparting IT trainings to atleast 300 participants or two order of 200 participants or three orders of 150 participants across multiple locations in India in last 3 years.
3. The Bidder should have his own lab equipment such as routers, Switches, PC etc. to be available when required, although ERNET has its own infrastructure which will mostly be used for these trainings.
4. The bidder should submit a copy of training course material for any one module of similar type as enclosed in **Annexure II** along with the technical bid.

5.2 IT CONSULTANCY:

1. The bidder should have a minimum of 15 IT consultancy staff on rolls of the company out of which atleast 5 should be IPv6 Certified and posted in India.
2. The bidder should have Purchase orders from government department / PSU for imparting IT consultancy as at least one order of 20 Lakhs or two orders of 15 Lakhs or three orders of 10 Lakhs each in India.

6) GENERAL CONDITIONS (Bidders to adhere to their relevant part)

1. The Quotations should be submitted in two separate **sealed** covers. First cover indicating, “**COVER FOR TECHNICAL SPECIFICATION**” should consist of only technical details as per the tender requirement along with literature, pamphlets, drawing, awards, PO etc. This cover should also contain complete Course contents and commercial terms etc. Price column in this cover should be kept blank.

Second cover indicating, “**COVER FOR PRICE BID**” should consist the price details. **Both the covers should first be sealed separately**, and then both the covers should be kept **in a single sealed bigger cover**. This cover addressed by name to the officer signing this enquiry should be submitted before due date and time.

2. Bids should be valid for a minimum period of 180 days after the due date.

3. Envelope should bear the inscription

“Quotation for empanelment of vendor for IPv6 Training / Consultancy services”.(Depending on whether the quote is for training or Consultancy or both)

“Tender Enquiry No. ” EI-D/Tech/18-43/2012

“Due Date & Time: 07.01.2013 at 3.00 PM

“Due Date & Time for Opening of Bids: 07.01.2013 at 3.00 PM”

4. The Bids must reach the undersigned on or before the due date/time given above. Bids received after the due date & time would be rejected. In the event of due date being a holiday or declared Holiday for Central Government offices, the due date for submission of the bids will be the following working day at the appointed time & venue.

5. All prices are to be quoted in INR for deliverables at the premises/sites/locations as specified by ERNET India without any additional charge all across India. All prices shall be fixed and shall not be subject to escalation of any description. The rates must be quoted as per the Performa provided in **Annexure-III or IV.**

Tender Document for Empanelment of a Vendors for IPv6 Training & consultancy services

6. Govt. Levies like service charges, sales tax, entry tax, octroi, WCT etc., if any, shall be paid at actual rates applicable. Rates should be quoted accordingly giving the basic price, Taxes etc., if any.
7. It may specifically be mentioned whether the quotation is strictly as per tender conditions. If not, deviations must be spelt out specifically. In the absence of this, it will be considered that there are no deviations.
8. Please give the Registration number of the firm along with the LST/CST/WCT No. allotted by the concerned authorities in your quotation.
9. ERNET India reserves the right to accept or reject any bid or cancel the tender proceedings without assigning any reason whatsoever.
10. The bidders should quote the services strictly as per the tendered specifications. All the technical literature for the services offered by the bidder should be enclosed in the bid.
Quotations with incomplete technical details shall be rejected.
11. Incomplete quotations are liable to be rejected.
12. Bidder shall sign all pages of quotation and drawings forwarded with the quotation.
13. In case of any discrepancy between rates mentioned in figures and words, the latter shall prevail.
14. Bidders must necessarily quote for all modules specified in **Annexure –III** (in case of training) and for all slabs specified for Consultancy in **Annexure -IV** respective failing which their bid will be summarily rejected During the period of empanelment, the purchase orders will be placed as per the actual requirements of ERNET/its customers for the items on the unit rates finalized against this tender.
15. ERNET India may waive any minor infirmity or may seek any clarification, if so desired.
16. Any attempt of negotiation direct or indirect on the part of the bidder with the authority to whom he has submitted the tender or authority who is competent finally to accept it after he has

submitted his tender or any endeavor to secure any interest for an actual or prospective bidder or to influence by any means the acceptance of a particular tender will render the tender liable to be excluded from consideration.

17. The bidder shall supply, Installation & commissioning all Equipment, spares and accessories as may be required during Training at all locations. The bidder will have to arrange/provide for all the equipment & tools required for successful Training if asked by ERNET.

18. ERNET India will have the right to reject the Quotation if it does not comply with the specifications at any point.

19. The bidders should give clause-by-clause compliance for the Course Contents / Consultancy Scope in their technical bids. Also give compliance of all the terms & conditions as mentioned in the Tender document.

20. The total price quoted by the bidders in the price format given at **Annexure. – III and Annexure- IV** would be calculated individually to determine L1 in respect of Annexure-III and Annexure-IV. However, rate contract will be awarded on the basis of L-1 price in each modules offered by the empanelled vendors (as per para 21 below). In case the empanelled successful bidder does not accept these rates, BG would be forfeited.

21. ERNET would empanel three vendors for the two services (Training & Consultancy) asked and orders would be given in the ratio of 50:35:15. In case only two bidders qualify, the ratio would be 60:40.

22. The bidder may submit bid for either training or consultancy or for both as per his convenience. L1 for both the categories training & consultancy will be evaluated separately.

23. The successful bidder/s would be empanelled initially for three years on the rates as per para 20 above. The contract would be extendable by another two years on mutual agreement.

24. Bidders are free to quote either for Annexure-III or Annexure-IV or both. However, bidders are required to quote for all the items of Annexure-III; or Annexure-IV, as the case may

be. Non-compliance of this condition would disqualify the bidder in respect of respective Annexure(s).

7) INSPECTION

ERNET India or its representative shall have the right to inspect Conduct of training for their conformity to the ordered specifications. The bidder shall provide all reasonable facilities and assistance to the inspector at no charge to ERNET India

8) EARNEST MONEY DEPOSIT

- i) Each quotation must be accompanied by Earnest Money Deposit of Rs. 1,00,000 (Rupees One Lac only) in the form of Demand Draft/Pay Order/Bank Guarantee of any Nationalized Bank taken in the name of Chief Finance officer, ERNET India, New Delhi. Bank Guarantee should be valid minimum for a period of 180 days from the original due date of the bid submission. **Quotations received without Earnest Money Deposit are liable to be rejected**
- ii) Earnest Money is liable to be forfeited and bid is liable to be rejected, if the bidder withdraw or amends, impairs or derogates from the tender in any respect within the period of validity of the tender.
- iii) If the successful bidder fails to furnish the performance Security within 15 days of the placement of the purchase order, the earnest money shall be liable to be forfeited by ERNET India.
- iv) The earnest money of all the unsuccessful bidders will be returned after placement of order on the selected vendor. No interest will be payable by ERNET India on the Earnest Money Deposit.
- v) The Earnest Money of successful bidder shall be returned after furnishing of Performance Security.

9) PAYMENT TERMS:

- a) **IT Trainings:** Payment will be released on completion of the training courses. However in case of training where large number of participants will be trained, the payment can be made on completion of certain number of batches, and the same would be decided at the time of placement of PO.
- b) **IT Consultancy:** Equal Installment of payment will be released after successful completion of each milestone of specific consulting assignment (Maximum 4).

10) Infrastructure for IT Training

Equipment:

- i) Although ERNET will in most cases provide training setup infrastructure on its own, State-of the art Hardware should be available with the vendor to augment / supplement wherever required and to provide hands-on experience. The training should be designed to ensure at least half of the duration of a subject allows hands-on experience
- ii) All software required for the conduct of customized computer course provided by the vendor should be licensed as understood with the terms of intellectual property rights (IPR)
- iii) The vendor should also possess modern teaching aids such as projectors, audiovisuals etc as well as facility for remote expert faculty if required.

11) PERFORMANCE SECURITY:

The successful empanelled bidder(s) shall submit a Performance Security of 10% of the cost of the purchase order within 15 days of the placement of purchase order. The Performance Security may be in the form of Demand Draft/Pay Order/Bank Guarantee of any nationalized bank. The Bank Guarantee should be valid for a minimum period of the rate contract and extendable to cover any extension of the rate contract period. In case supplier fails to deliver satisfactory Trainings, the Performance Security submitted by the firm is liable to be forfeited. Performance Security shall be released immediately after the successful deliverables. No interest will be payable by ERNET India on the Performance Security.

12) PENALTY

In the event of the bidder's fails to start Trainings / Consultancy by the date/dates specified in this Purchase Order, ERNET India may at its discretion withhold any payment, until the completion of training / consultancy by the bidder, as penalty at the rate of 1% of the PO value per week or a part of per week subject to a maximum of 10%. The amount towards penalty would be recovered from the amount of Bank Guarantee as required vide para 11 above or any amount payable to the firm.

Rates quoted by the bidder shall be final and no negotiation will be held. However, it would be subject to the discretion of the Competent Authority in ERNET India.

13) CANCELLATION of TENDER

ERNET India reserves the right to cancel the tender without assigning any reason.

14) EMPANELMENT OF BIDDERS

- (i) ERNET India would empanel one to three vendors each for IT Training and IT Consultancy to cater it's own requirement and for its users / customers and own requirements. The panel will be valid for a period of Thirty Six (36) Months in the first instance from the date of empanelment. It may be extended for a further period of Twenty Four (24) Months (at ERNET's Option and mutual agreement with vendor and depending upon the need for continuity).
- (ii) Distribution would normally be at **50(L1) + 35(L2) + 15(L3)** ratio basis on the applicable rates (the rates would be fixed as per the lowest price in each modules offered by the other successful bidder/s). In case of two successful bidders, the ratio would be **60(L1) + 40(L2)**. The empanelled vendor/s would provide the services at the rates finalized through this tender during the period of empanelment / extended empanelment.
- (iii) The empanelled bidder shall have to provide acceptance to the empanelment offer issued by ERNET India for honoring all tender conditions and adherence to all aspects of fair trade practices in executing the purchase orders placed by ERNET India.
- (iv) In the event of an empanelled Company or the concerned division of the Company is taken over /bought over by another company, all the obligations and

execution responsibilities under the agreement with ERNET India, shall be passed on for compliance to the new company in the negotiation for their transfer.

- (v) In case of empanelled bidder is found in breach of any condition(s) of tender or Purchase Order, at any stage, the legal action as per rules/laws, shall be initiated against the bidder and EMD/Security Deposits shall be forfeited, besides debarring and blacklisting the bidder concerned for at least three years, for further dealings with ERNET India.
- (vi) The vendor should not assign or sublet the empanelment or any part of it to any other agency in any form. Any such eventuality shall result in termination of empanelment and forfeiture of Security Deposit/EMD concerning such vendors / parties.
- (vii) ERNET India may, at any time, terminate the empanelment by giving written notice to the empanelled vendor without any compensation, if the empanelled vendor becomes bankrupt or otherwise insolvent, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to ERNET India.
- (viii) No deviations from these terms and conditions will be accepted; violation thereof will lead to rejection of the bid and forfeiture of EMD.

15) EVALUATION of TENDER

- i) The Commercial Bid format as in **Annexure-III** and **Annexure-IV** has been enclosed herewith.
- ii) The tenders will be technically evaluated based on eligibility criteria, technical solution / products offered and other terms & conditions of the tender document.
- iii) The technically short listed bids will be evaluated on price quoted by bidders in annexure-III & IV enclosed in the tender.

Yours faithfully,

(Dinesh Kumar Dixit)
Registrar & CPO

16) **SCOPE OF WORK**

A) IT TRAININGS

- Providing adequate no of competent faculty (minimum of two numbers) for Training (both theoretical and practical hands on) in a batch maximum upto 20 participants at respective Location.
- Preparation of training material (both theoretical and practical workbook for hands on) to be taught by the vendor as per the course content. The same has to be approved by ERNET India and will become the property of ERNET India
- The training courseware and related presentation are to be prepared by the vendor(s) in consultation with ERNET team and would be approved by ERNET.
- The venue, lodging and boarding of the participants will be the responsibility of ERNET.
- ERNET will help in arrangement for boarding and lodging at the training location, if feasible for the vendor's staff, however the payment for the same would be borne by the vendor.
- Approved training kit with courseware like training handouts / books to all the participants will be provided by the successful bidder.
- The training to be imparted simultaneously in one or more locations at a time.
- Course completion certificate must be given to all the participants.
- The bidder will be required to impart training at various locations in the States/UTs across India.
- Training should include courses on IPv6 technology as per the guidelines of IPv6 forum.

- ERNET team and the Client team are to do the quality check of the training program at all the locations in addition to general co-ordination. ERNET team will also be providing inputs to the successful bidder in the preparation of the courseware in close consultation with the Client teams.
- The training has to be done in English.
- The Bidder should have minimum 5-6 certified resources on its roll. The resources should be certified as per IPv6 forum curriculum with sound knowledge on the subject.
- Creation of Training Portal to be property of ERNET and hosted at ERNET India with the following features broadly.
 - Online Test module (Multiple Choice questions)
 - Online Registration form to be filled by Participants with their personal particulars along with the module he intends to get training on. The same to be approved by Training Incharge after filling in Payment Details.
 - After approval, participants account will automatically get created with a registration number.
 - By logging in through the portal the participant can:
 - Attempt online test module wise as given in Training section to which he is entitled (Upto 2 attempt)
 - On successful passing a certificate for passing to be given. Till that time a certificate of Participation to be given. Certificates should have unique number and should be verifiable online by employers etc.
 - Facility for participant to apply for another module in future - To be approved by Training Incharge after filling payment Details subsequently followed by same procedure as above.
 - Provision for adding new module by System Admin
 - Provision for adding new questions and answers
 - All source code, related software etc. to be handed over to ERNET with License if any.

B) IPV6 CONSULTING:

Define and carry out consulting activities related to IPv6 migration strategy and planning, through modes like Interviews and sessions with various stakeholders to understand and charter a strategy plan for IPv6 Implementation.

This shall cover –

(I) IPV6 MIGRATION ASSESSMENT AND GAP ANALYSIS:

- Infrastructure Readiness and network audit

(II) STRATEGY PLANNING:

- Detailed IPv6 Implementation / Adoption Roadmap and Project Plan
- Key adoption challenges
- Creating documentation templates and comprehensive documentation roadmap

(III) NETWORK PLANNING AND DESIGN:

- Addressing Planning based on existing and future requirements
- Creating an IPv6 Network Architecture as per requirements
- IPv6 Integration Planning - Transition Methodology Options – Identification, Evaluation and Selection
- Network Design and configuration planning, as per selected transition methodology
- Identification of applications and services for migration
- Security Planning and considerations
- Network Implementation and Test Planning
- Documenting all the activities carried out in standardized formats

(III) (IV) SELECTION OF IMPLEMENTING AGENCY:

- Preparation of detailed technical and financial tender document for the prevailing and planned IP infrastructure in the respective department/organization.

17) Training Materials

The training materials are to be prepared by the successful bidder in close consultation with ERNET India team. The practical sessions on the concepts taught in the classroom has to be prepared by the successful bidder so that the participants can have hands on experience on the taught subject. The approved training material covering the topics mentioned at Annexure II in the form of PowerPoint presentations would have to be printed in a book.

The training material in book form will be distributed to all the participants by the empanelled vendor. Also, a bag, a pen, pencil, writing pad would be provided to all the participants by the vendor. Selected vendor has to make adequate copies of the approved training material as required at its cost. All training materials would become property of ERNET India

Course Content

Module 1(Overview of IPv6) -4 days

Day-1	<p>Introduction to IPv6</p> <p>Explaining the Rationale for IPv6 , IP Address Allocation, History of IPv4 , Next Generation of IP, Revisited Understanding DHCPv6</p>
Day-2	<p>IPv6 Addressing</p> <p>Features and Benefits of IPv6 , IPv6 Addresses, Representation of Address, Address types, Unicast, Multicast, Any cast IPv6 Sub netting, IPv6 Auto configuration and Aggregation, IPv6 Packet Structure, Understanding the IPv6 Addressing Architecture , IPv6 Addressing Architecture, IPv6 Address Formats and Types, IPv6 Address Uses, Required IPv6 Addresses</p>
Day-3	<p>ICMPv6 and NDP</p> <ul style="list-style-type: none"> • ICMPv6 packet format • ICMPv6 Operation • Path MTU Discovery • Neighbor discovery protocol(NDP) • Address auto configuration – Stateless and stateful • Stateless Address Auto Configuration (SLAAC) • Address resolution • Next-hop determination • Neighbor unreachability detection (NUD) • Duplicate address detection (DAD) • Redirect
Day-4	<p>Describing the IPv6 Header Format</p> <p>IPv6 Header Changes and Benefits , IPv6 Header Fields, IPv6 Extension Headers</p>
Day 5	<p>Introduction to Transition & Translation Mechanisms</p> <ul style="list-style-type: none"> • Dual Stack • Tunnelling(Manual, ISATAP, Teredo.6over4& 6rd) • MPLS Solutions (6PE & 6VPE) • NAT Protocol Translation (6to4) • IPv6 Transition case studies

Module 2 (IPv6 System Administration) - 7 days

Day-1	<p>Enabling IPv6 on Hosts</p> <p>Enabling IPv6 on Hosts , Enabling IPv6 on Windows , Mac OS, Linux</p>
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Day-2	<p>Enabling IPv6 on Routers</p> <p>Enabling IPv6 on Routers, IPv6 Address Configuration, Auto configuration</p>
Day-3	<p>Using ICMPv6 and Neighbour Discovery</p> <p>o ICMPv6 ,ICMP Errors ,Echo ,IPv6 over Data Link Layers, Neighbour Discovery, Stateless Auto configuration, Value of Auto configuration , Renumbering, IOS Neighbour Discovery Command Syntax , IOS Network Prefix Renumbering Scenario, ICMP MLD , IPv6 Mobility, Campus IPv6 Deployment, Translation, IPv6 Porting Application, Programmer's Reference: Network Programming in C#.Net, Application Porting Lab Exercise</p>
Day-4	<p>Mobile IPv6</p> <p>Introduction to IP Mobility, Mobile support to IPv6, Network Mobility Examples</p>
Day-5	<p>Describing DNS in an IPv6 Environment</p> <p>DNS Objects and Records , DNS Tree Structure , Dynamic DNS</p>
Day-6	<p>Understanding DHCPv6 Operations</p> <p>DHCPv6, DHCPv6 Operation , DHCPv6 Multicast Addresses , DHCPv6 Prefix Delegation Process , DHCPv6 Troubleshooting</p>
Day-7	<p>Enabling IPv6 on windows server and Linux server & Managing the IPv6 services.</p> <p>IPv6 Services</p> <ul style="list-style-type: none"> • DNS for IPv6 • New record types (AAAA) • Forward and Reverse Zones • DNS Flow • Global DNS support • Dynamic Name Resolution Services • Compare/Contrast with DHCPv4 • The DHCPv6 process • Stateful Autoconfiguration • Stateless DHCPv6 (aka DHCP-Lite) • DHCPv6 Prefix Delegation • Renumbering • WWW for IPv6 • QoS for IPv6

Module 3 (IPv6 Networking Essentials) - 4 Days

Day-1	<p>IPv6-Enabled Routing Protocols</p> <p>Routing with RIPng ,Introducing RIPng for IPv6 ,Examining RIPng Enhancements ,Configuring RIPng</p>
Day-2	<p>Examining OSPFv3</p> <p>OSPFv3 Key Characteristics ,OSPFv3 Enhancements ,OSPFv3 Configuration ,OSPFv3 IPsec ESP Authentication and Encryption ,OSPFv3 Advanced Functionalities ,Examining</p>
Day-3	<p>Integrated IS-IS</p> <p>Integrated IS-IS Characteristics ,Changes Made to IS-IS to Support IPv6 , Single SPF Architecture ,Multitopology IS-IS for IPv6 ,IS-IS IPv6 Configuration on Routers</p> <p>IPv6 Routing</p> <ul style="list-style-type: none"> • Static Routing • Dynamic Routing • RIPng • EIGRP for IPv6 • OSPFv3 • IS-IS for IPv6 • MP-BGP4 for IPv6 • Policy Based Routing for IPv6 • FHRP for IPv6
Day-4	<p>Managing IPv6 Network</p> <ul style="list-style-type: none"> • Network-Management Architecture • Fault Management • Performance Management • Configuration and Provisioning Management
Day 5	<p>Understanding QoS Support in an IPv6 Environment</p> <p>IPv6 Header Fields Used for QoS , IPv6 and the Flow Label Field, IPv6 QoS Configuration</p>

Module 4(IPv6 Advance Networking) - 5 days

Day-1	<p>Examining EIGRP for IPv6</p> <p>EIGRP for IPv6 ,IOS EIGRP for IPv6 Commands</p> <p>Understanding MP-BGP ,MP-BGP Support for IPv6 , IPv6 as Payload and Transport Mechanism in MP-BGP , BGP Peering Over Link-Local Addresses, BGP Prefix Filtering ,MP-BGP Configuration and Troubleshooting</p>
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Tender Document for Empanelment of a Vendors for IPv6 Training & consultancy services

Day-2	<p>Configuring IPv6 Policy-Based Routing</p> <p>Policy-Based Routing ,Configure PBR</p> <p>Configuring FHRP for IPv6</p> <p>First-Hop Redundancy Protocols and Concepts , HSRP for IPv6 ,GLBP for IPv6</p>
Day-3	<p>Configuring Route Redistribution</p> <p>Route Redistribution ,PE-CE Redistribution for Service Providers</p>
Day-4	<p>IPv6 Multicast Services</p> <p>Implementing Multicast in an IPv6 Network , IPv6 Multicast Addressing</p> <p>PIM for IPv6 ,Rendezvous Points ,MP-BGP for the IPv6 Multicast Address Family ,How to Implement Multicasting in an IPv6 Network ,IPv6 Multicast Application Example</p>
Day-5	<p>Using IPv6 MLD</p> <p>Multicast Listener Discovery ,MLD Snooping and MLD Group Limits</p> <p>Multicast User Authentication and Group Range Support</p>
Day-5	<p>IPv6 Design and Deployment</p> <ul style="list-style-type: none"> • Addressing Considerations and Plans • Infrastructure Deployment • Impacts of CGN • Provider Considerations • Preparing for IPv6 deployments • Steps for IPv6 deployments • Address Planning • Assessment • Design and Planning • Testing and Validation

Module 5 (Transition and Security in IPv6): 6 Days

Day-1	<p>IPv6 Transition Mechanisms & Tunnelling Mechanisms</p> <p>Implementing Dual-Stack ,Dual-Stack Applications ,Dual-Stack Node ,The Dual-Stack Approach , Overlay Tunnels ,Manually Configured Tunnels ,Automatic Tunnels</p>
Day-2	<p>IPv6 Security</p> <p>Why Is Ipv6 Claimed Better in Performance than IPv4, Expending Security Policies ,Security implication of mixed IPv4/IPv6 network ,Network Monitoring and analysis , Network Management and IPv6, IPv6 Routing</p>

	issues, IPSec in IPv6, Vulnerabilities in IPv6, IPv6 Network Attacks Hands-on
Day-3	<p>Configuring IPv6 ACLs</p> <p>IPv6 ACLs ,IPv6 ACL Configuration , Reflexive and Time-Based ACLs, IPv6 Header Filtering , New ICMPv6 Types , Editing of ACLs , How to Configure ACLs in an IPv6 Environment</p>
Day-4	<p>Using IPsec, IKE, and VPNs</p> <p>IPsec, IKE, and VPNs Basics ,IPsec and IKE ,VPN Connections Using IPv6 Discussing Security Issues in an IPv6 Transition Environment ,Dual-Stack Issues ,Tunnel Security Issues ,NAT-PT Security Issues ,ICMP Traffic Requirements</p>
Day-5	<p>Understanding IPv6 Security Practices</p> <p>Threats in IPv6 Networks ,Build Distributed Security Capability ,Hide Topology when Possible , Secure the Local Link ,ICMPv6 at Edge—Manage ICMPv6 Traffic , Develop Mobility Support Plan , Use Transition Mechanisms as Transport , Secure the Routing Plane , Deploy an Early-Warning System</p>
Day-6	<p>Configuring IOS Firewall for IPv6</p> <p>IOS Firewall for IPv6 , IPv6 Inspection on ISRs , Implement IPv6 Inspection on ISRs ,Zone-Based Policy Firewall for IPv6 on ISRs , Configuring Zones and Zone Pairs , Configuring a Basic OSI Layer 3 to 4 Interzone Access Policy, Troubleshooting the Zone-Based Policy Firewall</p>

General Guide/ example of Hands-on Exercise: Vendor has to ensure that the hands-on exercise given below is conducted based on the relevancy of the above module/s

- Configuration of web server in Windows, Linux in IPV 6
- Enabling IPv6 on Hosts
- Using Neighbour Discovery
- Using Prefix Delegation
- Routing with OSPFv3
- Routing with IS-IS
- Routing with EIGRP
- Routing with BGP and MP-BGP
- Multicasting
- Implementing Tunnels for IPv6
- Configuring Advanced ACLs

- Implementing IPsec and IKE
- Configuring IPv6 on Firewall
- Configuring 6PE and 6VPE

PRICE SCHEDULE FOR IPv6 Training

To,

The Registrar & CPO
 ERNET India
 10th Floor, Jeevan Prakash Building,
 25, K.G. Marg,
 New Delhi – 110 001.

Tender No. _____

Date of Opening

We _____ hereby certify that we are established firm with modern equipment and training infrastructure which will be open to inspection by the representative of ERNET India. We hereby offer to provide the following services at the prices and within the period indicated below:

S. No.	Item Description	Qty. ** (A)	*Unit price (upto 20 participants) (B)	*Unit price (upto 50 participants) (C)	Unit price (upto 100 participants) (D)	Total E= A* (B+C+D)	Total Tax / Surchage (F)	Any other Charges (G)	Total price in INR H = (E+F+G)	
01	Module-1	200								
02	Module 2	150								
03	Module 3	100								
04	Module 4	50								
05	Module 5	50								
06	Training Portal*	01	Total inclusive of any software / Tax etc. with maintenance and augmentation for 3 years							
Grand Total										

* Portal to be awarded to the Lowest bidder in this item

** For Calculation purpose only

We (bidder) hereby undertake and confirm that:

1. The quotation has been submitted for all items strictly as per the specifications and been given compliance in this regard.
2. There are No deviations in the specifications as asked in the tender.
3. It is hereby confirmed that we have understood the terms and conditions of the tender and have thoroughly examined specifications and are thoroughly aware of the nature of services required and our offer is to provide services strictly in accordance with the requirement and terms and conditions of the tender. We agree to abide by the terms and conditions of the tender if the contract is awarded to us.
4. We hereby offer to provide services detailed above or such portion thereof as you specify in the purchase order at the price quoted and agree to hold this offer open for acceptance for a period of 180 days from the date of opening of bid.
5. Bid security for an amount equal to Rs./- is enclosed in the form of Bank Draft/Pay Order/ Bank Guarantee.

(Signature and seal of Bidder)

Dated _____

PRICE SCHEDULE FOR IPv6 Consultancy

To,

The Registrar & CPO
ERNET India
10th Floor, Jeevan Prakash Building,
25, K.G. Marg,
New Delhi – 110 001.

Tender No. _____

Date of Opening

We _____ hereby certify that we are established firm with modern equipment and training infrastructure which will be open to inspection by the representative of ERNET India. We hereby offer to provide the following services at the prices and within the period indicated below:

S. No.	Item Description	Price (A)	Taxes (B)	Any other Charges (C)	Total Price In INR (A+B+C)
01	For 50 or below nodes				
02	From 51 to 100 nodes				
03	From 101 to 250 nodes				
04	From of 251 to 500 nodes				
05	From of 501 to 1000 nodes				

Nodes means no of PC, other supporting devices like routers, switches, firewall & Servers etc. have to be incorporated in the same.

Tender Document for Empanelment of a Vendors for IPv6 Training & consultancy services

We (bidder) hereby undertake and confirm that:

1. The quotation has been submitted for all items strictly as per the specifications and been given compliance in this regard.
2. There are No deviations in the specifications as asked in the tender.
3. It is hereby confirmed that we have understood the terms and conditions of the tender and have thoroughly examined specifications and are thoroughly aware of the nature of services required and our offer is to provide services strictly in accordance with the requirement and terms and conditions of the tender. We agree to abide by the terms and conditions of the tender if the contract is awarded to us.
4. We hereby offer to provide services detailed above or such portion thereof as you specify in the purchase order at the price quoted and agree to hold this offer open for acceptance for a period of 180 days from the date of opening of bid.
5. Bid security for an amount equal to Rs./- is enclosed in the form of Bank Draft/Pay Order/ Bank Guarantee.

(Signature and seal of Bidder)

Dated _____

PROFORMA FOR BANK GUARANTEE FOR CONTRACT PERFORMANCE

(To be stamped in accordance with stamp Act)

(The non-judicial stamp paper should be in the name of issuing Bank)

Bank Guarantee No.

Ref.:.....

Date:.....

To,

The Registrar & CPO
ERNET India
10th Floor, Jeevan Prakash Building,
25, K.G. Marg,
New Delhi – 110 001.

Dear Sir,

In consideration of the ERNET India, Department of Information Technology Ministry of Communications & Information Technology (hereinafter referred as the '**Owner**', which expression shall unless repugnant to the context or meaning thereof include its successors, administrators and assigns) having awarded to M/s. _____ (herein referred to as the '**Contractor**', which expression shall unless repugnant to the context of meaning thereof, include its successors, administrator, executors and assigns) a contract bearing No. _____ dated _____ valued at _____ for _____ and the Contractor having (scope of Contract) agreed to provide a Contract Performance of the entire Contract equivalent to (_____ per cent) of the said value of the Contract to the Owner.

We _____ having its (Name & Address) Head Office at _____ (hereinafter referred to as the '**Bank**', which expression shall, unless repugnant to the context or meaning thereof, include the successors, administrators, executors and assigns) do hereby guarantee and

Tender Document for Empanelment of a Vendors for IPv6 Training & consultancy services

undertake to pay the Owner, on demand any and all money payable by the Contractor to the extent of _____ as aforesaid at any time up to _____ (day/month/year) without any demur, reservation, contest, recourse or protest and/or without any reference to the Contractor. Any such demand made by the owner the Bank shall be conclusive and binding notwithstanding any difference between the Owner and Contractor or any dispute pending before any court, tribunal or any authority.

The Bank undertakes not to revoke this guarantee during its currency without previous consent of the Owner and further agrees that the guarantee herein contained shall continue to be enforceable till the Owner discharges this guarantee. The owner shall have the fullest liberty, without affecting in any way the liability of the Bank under this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the Contractor, and to exercise the same at any time in any manner, and either to enforce or to forebear to enforce any covenants, contained or implied, in the Contract between the Owner and the Contractor or any other course of or remedy or security available to the Owner. The Bank shall not be relieved of its obligations under these presents by any exercise by the owner or by any other matters or thing whatsoever which under law would, but for this provision, have the affect of relieving the Bank. The Bank also agrees that the Owner at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee that the Owner may have in relation to the Contractors liabilities.

Notwithstanding anything mentioned herein above our liability under this guarantee is restricted to Rs. _____ and it shall remain in force up to and including _____ shall be extended from time to time for such period as may be desired by M/s. _____ on whose behalf this guarantee has been given.

WITNESS

BANK

Signature _____

Signature _____

Name _____

Name _____

(Bank's Rubber Stamp)

Official address _____

Designation with Bank Stamp

Attorney as per Power of Attorney No. _____

Date: _____