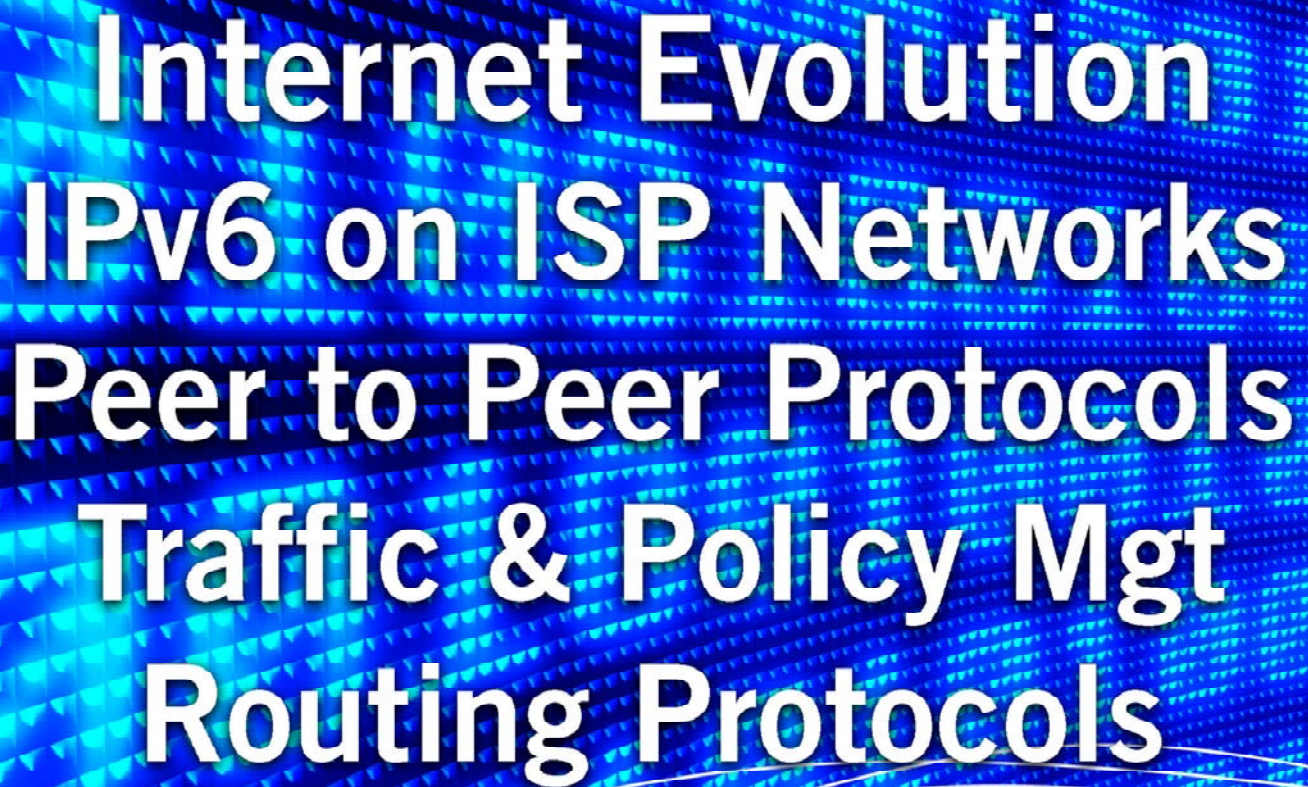


ISP Network Protocols & Management

19 November - 23 November 2012, Port Louis, Mauritius



Internet Evolution IPv6 on ISP Networks Peer to Peer Protocols Traffic & Policy Mgt Routing Protocols

ISP Network Protocol and Management will provide Network Engineers with the essential skills to fully understand the architecture and components of an ISP network. The course will introduce specific network enhancement protocols, and the impact IPv6 will have on an ISP network, through a combination of lectures, and group exercises, the course will cover:

- Protocols used in ISP environments
- Routing Protocols
- Peer to Peer Protocols
- The internet evolution
- IP Network Security
- Mail protocols
- Traffic & Policy Management
- Case Studies



COMMONWEALTH
TELECOMMUNICATIONS
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Overview

Objectives

To make the participants aware of the architecture and components of an ISP network, Internet Evolution, Protocols used in ISP environment, such as PPP, DHCP, DNS, AAA and RADIUS.

Expected Outcomes

Upon full completion of the course, delegates will be able to:

- Demonstrate the fundamentals of the architecture of an ISP network
- Describe the core components of an ISP network
- Explain the evolution of the internet
- Assess protocols that should be used in an ISP network environment?
- Explain the Impact of IPv6 on an ISP network
- Enhance intelligence of your network through Traffic & Policy Management
- Develop enhanced routing protocol algorithms
- Identify security measures to improve network security and resilience

Course Outline

- The architecture and components of a ISP network
- Data communication Concepts
- TCP/IP
- Protocols used in ISP environment
 - PPP
 - DHCP
 - DNS
 - AAA
 - RADIUS
- Impact of IPv6 on ISP network and
- Migration strategy-
 - Tunneling,
 - Dual Stack
- Peer to Peer Protocols
 - PPPoE,
 - PPPoA
- Traffic & Policy Management
- Traffic Engineering concept and admission control
- IP Routing Protocols
 - RIP
 - OSPF
- Understanding of IP management
- Understanding service and QoS,
- Bandwidth

- IP Network Security-IPSec
- Firewall concepts
- IP Management
 - Scarcity
 - Security
 - Mobility
- Mail protocols
 - SMTP
 - POP
 - IMAP
- Security aspects

Expert Profiles

Ram Pratap Singh

Ram Pratap Singh is an Engineering graduate in Electronics and Communication and masters in communications systems from IIT, Roorkee, India. He has more than 11 years experience in the telecom industry. He was deeply involved in switching equipment installations and commissioning of OCB-283 switching technology in the BSNL network. He has undergone training on OCB-283 switching equipment, IN, GSM, WLL etc telecom technologies. He has also been trained in WiMax at Shenzhen, China. He has also attended the exhibition of MPLS and Ethernet World Congress and V6 World Congress/IPv6. He has experience of planning, operation and maintenance of telecom services in rural and urban areas.

He is currently working as Deputy General Manager at ALTTC (Advance Level Telecom Training Centre), an apex and world-class training centre of BSNL and has been engaged in training at BSNL for the last 7 years.

He is the Head of the Broadband Faculty and has contributed in developing and designing of training modules on Broadband, MPLS, IP Networking, Multiply services and WiMax, IT and IPv6. He has imparted training to more than 2500 telecom executives from public & private sector. He is a member in the national core committee of IPv6 implementation.

Dhirendra Verma

Dhirendra Verma, is a member of the Indian Telecom Service, Government of India and presently working as a Deputy General Manager of BSNL the leading Government owned Telecom operator of India. He is a graduate in Electronics and Communication (Honours).

He holds an MBA with specialization in Finance and also completed an advanced Post Graduate program in Cyber Laws. Prior to joining BSNL, he worked as a Research Engineer in CDOT, a pioneer R&D organization of Telecom Ministry in India and had gained in-depth experience in telecom software development.

For the last 9 years, he has been working in internet field and has gained vast experience in planning, design, O&M of internet network, international internet bandwidth, internet peering, network security, cybersecurity, IP addressing etc. He is core member for IPv6 implementation in BSNL network. He has detailed hands-on experience on equipments from different OEM's like Cisco, Juniper, 3COM, Nortel, Ericsson, SUN, IBM etc.

He was awarded a special service award for his exemplary contribution to BSNL Internet growth. He has attended many national and international seminars in advance Internet fields like broadband, WiMAX, NGN etc and has delivered presentations/lectures to senior personnel of telecom industry. Currently he is heading data centre, an OSS-BSS system for broadband services of BSNL.

Target Audience

The following course is targeted at Network Engineers, Solution Architects, Network Managers, Data Centre Managers

To suggest other topics to be included in this course, please email us at programmes@cto.int

About the CTO

The CTO is the oldest and largest Commonwealth organisation engaged in multilateral collaboration in the field of information and communication technologies. It uses its experience and expertise to support members in integrating ICTs to deliver effective development interventions that enrich, empower, and emancipate people within the Commonwealth and beyond. For more information, write to info@cto.int

About the PDT

The PDT is a unique cost-effective funding mechanism to provide bespoke professional training and capacity development in ICT policy, regulation, network and telecom business management. Through the PDT, over a thousand ICT professionals benefit each year from its specialist courses and consultancy services. For more information about how to join the PDT, write to programmes@cto.int

Forthcoming courses...

26 - 30 Nov 2012	Business Process Re-Engineering , Mauritius
26 - 30 Nov 2012	Quality of Service for Internet Access , Mauritius
26 - 29 Nov 2012	Strategic Marketing and Sales , Trinidad & Tobago
03 - 07 Dec, 2012	Radio Spectrum Monitoring Techniques , Mauritius
03 - 07 Dec, 2012	Fibre to the Home Deployment , Mauritius
29 Jan - 02 Feb 2013	Maritime Radio Communications Regulation , Kenya
04 - 08 Feb, 2013	Mobile Number Portability , Trinidad & Tobago
04 - 08 Feb, 2013	Computer Incident Handling Management , Kenya
11 - 15 Feb, 2013	Emerging Markets and Technology , Fiji Island
18 - 20 Feb, 2013	Product Service Pricing & Forecasting , Fiji Island
18 - 22 Feb, 2013	Marketing for an ICT Regulatory Environment , Mauritius
04 - 08 Mar, 2013	Broadband Pricing and Portfolio Mgt. , Fiji Islands

Forthcoming conferences...

11 - 13 Feb 2013	8th Annual DBSF Forum , South Africa
25 - 27 Mar 2013	7th Annual e-Gov Africa Uganda
22 - 26 Apr 2013	Commonwealth Cybersecurity Conference , Cameroon

Registration Form

ISP Network Protocols & Management, 19/11/2012 - 23/11/2012, Port Louis, Mauritius

Event ID: 7354

Please clearly fill all sections of this application form and fax it back to +44 20 8600 3819, or return it to the CTO at programmes@cto.int. Please use CAPITAL LETTERS.

Personal Details

Mr/Mrs/Ms/Other _____ First Name _____ Last Name _____
Job Title _____
Organisation _____
Address _____
City _____ Postcode _____ Country _____
Tel. _____ Mobile _____ Fax _____
E-mail _____
Authorising Line Manager's Name _____
Authorising Line Manager's E-mail _____

REGISTRATION DEADLINE

09 November 2012

3 SIMPLE WAYS TO REGISTER!

Fill in and fax this form back at
+44 20 8600 3819

Call the programme team at
+44 20 8600 3800

E-mail the programme team at
programmes@cto.int, quoting the course
"Event ID" above.

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or e-mail the Programmes team at
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Payment Options

1. **Select Delegate Rate** (please refer to the list of CTO members/PDT Partners provided overleaf)

	Standard Rate	Early Registration by: 05 October 2012
CTO Members	<input type="checkbox"/> £799	<input type="checkbox"/> £749
PDT Partners	<input type="checkbox"/> £799	<input type="checkbox"/> £749
Others	<input type="checkbox"/> £1,199	<input type="checkbox"/> £1,149

2. **Payment Mode** (choose from either Invoice, Bank Transfer, Cheque, or Credit Card)

Invoice
Invoice me at the above address
(Discounts do not apply, payment
must be received by us prior to the above
event's start date)

Bank Transfer
To: Coutts & Co., 440 Strand, London WC2R 0QS, UK
A/c Name: CTO; A/c Number: 83675071
Reference: GB72COUT18000208367507
Sort Code: 18-00-02; Swift Code: COUTGB22

Cheque
Cheque enclosed,
payable to "CTO HQ"

Credit Card: Visa / Mastercard (circle as appropriate)

Card Holder's Name _____
Card Holder's Billing Address (if different from above) _____
Card Number

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Valid From

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 Expiry Date

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 3-digit security code on back of card

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Signature

Date _____ Name _____ Signature _____

Additional Information

To help us improve our services to you and your organisation, please tell us more about you and your organisation.

Your role in the organisation <input type="checkbox"/> Strategic/executive <input type="checkbox"/> Planning <input type="checkbox"/> Control <input type="checkbox"/> Operational	Your area of work in the organisation <input type="checkbox"/> Business development <input type="checkbox"/> Corporate affairs <input type="checkbox"/> Customer service and care <input type="checkbox"/> Engineering and technical management <input type="checkbox"/> Financial, purchasing and investor relations <input type="checkbox"/> IT/IP management Your organisation's service areas <input type="checkbox"/> Fixed network/services <input type="checkbox"/> Mobile/wireless network/services <input type="checkbox"/> Satellite network/services <input type="checkbox"/> Internet	<input type="checkbox"/> Marketing and sales <input type="checkbox"/> Public relations and corporate communications <input type="checkbox"/> Regulatory and legal affairs <input type="checkbox"/> Telecoms network management <input type="checkbox"/> Human resources <input type="checkbox"/> Other <input type="checkbox"/> Broadcasting <input type="checkbox"/> Value-added services <input type="checkbox"/> Support <input type="checkbox"/> Other services
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Summary Terms and Conditions

The CTO will endeavour, as can be reasonably expected, to ensure that the course is delivered to meet delegates' expectations. Registration is subject to availability and payment received by the deadline where specified, or else before the course start date, whichever applies. Dates may be subject to changes. Travel, accommodation, daily transportation to venue, subsistence and other costs are the sole responsibility of the delegate and are not included in the above fees. Applicants are responsible for their visa arrangements and other formalities wherever required. Course bookings may be cancelled at the discretion of the CTO or its partners. Applicants paying by bank transfer are responsible for bank charges and any other such costs and should ensure the exact amount in GBP Sterling is credited in the CTO bank account. Applicants requiring additional information prior to their booking should ensure they provide sufficient time before the booking deadline. Cancellation rules apply, as summarised below. For a full version of our Terms and Conditions, please visit our website at www.cto.int.

Cancellations / Refunds

For delegate cancellations/withdrawals, the following refund rules apply:
- 31 days or more prior to event: the full amount less a handling charge of 10% or a minimum of £55, whichever applies
- 30 days or less prior to event: no refund
For CTO cancellations/withdrawals, delegates are entitled to a 100% refund within 60 days of the withdrawal/cancellation.
Refunds will be made by bank transfer only.

Data Protection / Privacy

The CTO does not sell, rent or lease its customer information to third parties. We may, from time to time, contact you on behalf of a third party/partner about a particular offering that may be of interest to you. In those cases, your unique personally identifiable information (e-mail, name, address, telephone number) is not transferred to the third party/partner. In addition, we may share your information with trusted partners to help us perform statistical analyses, send you by e-mail or postal mail, provide customer support, or arrange for deliveries or other such services. All such third parties are prohibited from using your personal information except to provide these services to the CTO and they are required to maintain the confidentiality of your information. For more information about our privacy policy, visit our website at www.cto.int.

CTO Member Countries

Bangladesh (Bangladesh Telecommunication Regulatory Commission), Barbados (LIME), Botswana (Ministry of Transport and Communications), Cameroon (Telecommunications Regulatory Board), Cyprus (Ministry of Communications and Works), Fiji (Ministry for Justice, Electoral Reform, Public Enterprises and Anti-Corruption), The Gambia (Public Utilities Regulatory Authority), Ghana (Ministry of Communications), Guyana (Ministry of Public Works and Communications), India (Ministry of Communications and Information Technology), Jamaica (Office of Utilities Regulation), Kenya (Communications Commission of Kenya), Lesotho (Lesotho Communications Authority), Malawi (Malawi Communications Regulatory Authority), Malaysia (Malaysian Communications and Multimedia Commission), Malta (Ministry for Competitiveness and Communications), Mauritius (Ministry of Information Technology and Telecommunications), Mozambique (Instituto Nacional das Comunicações de Moçambique), Nigeria (Ministry of Information and Communications), Pakistan (Pakistan Telecommunication Authority), Papua New Guinea (National Information and Communication Technology Authority), Seychelles (Ministry of Information Technology and Communication), Sierra Leone (National Telecommunications Commission), Solomon Islands (Department of Transport, Works and Communications), South Africa (Department of Communications), Sri Lanka (Telecommunications Regulatory Commission), Swaziland (Swaziland Posts and Telecommunications Corporation), Tanzania (Tanzania Communications Regulatory Authority), Trinidad Tobago (Ministry of Public Administration), Uganda (Uganda Communications Commission), United Kingdom (Ofcom), Vanuatu (Telecom Vanuatu Ltd.), Zambia (Zambia Information and Communications Technology Authority).

Important: Member rates apply to nominated CTO Full Member Country delegates, as well as delegates from CTO ICT Sector Members as listed below.

With the exception of delegates from organisations listed under 'PDT Partners and CTO ICT Sector Members' below, delegates from Associated National Member Countries (Antigua Barbuda, Dominica, Grenada, Maldives, St. Christopher Nevis, St. Lucia, St. Vincent and the Grenadines, Tonga) and Associated Territories (Anguilla, Ascension, Bermuda, Cayman Islands, Falkland Islands, Gibraltar, Montserrat, St. Helena, Tortola, Turks Caicos Islands) do not benefit from CTO Member Country rates.

PDT Partners and CTO ICT Sector Members

Bangladesh (Bangladesh Telecommunication Regulatory Commission), Bermuda (Department of Telecommunications), Botswana (Botswana Telecommunications Corporation), Cameroon (Telecommunications Regulatory Board), Canada (Alliances Consulting Group Inc, ESI), Fiji Islands (Fintel), Finland (Microtask, Nokia, NSN), The Gambia (Gambia Telecommunications Company, Public Utilities Regulatory Authority), Ghana (Kasapa, Ministry of Communications, Vodafone), Gibraltar (Gibraltar Regulatory Authority), India (BSNL, Eagle Photonics), Jamaica (Office of Utilities Regulation), Kenya (Communications Commission of Kenya, Safaricom), Malawi (Malawi Telecommunications Ltd.), Malaysia (Telekom Malaysia Berhad*), Malta (Exigy), Mauritius (Mauritius Telecom, Information and Communication Technologies Authority), Mozambique (Telecomunicações de Moçambique), Nigeria (Ministry of Information and Communications, Nigerian Communications Commission, Airtel*), Papua New Guinea (Telikom PNG), Seychelles (Cable Wireless Seychelles), Sierra Leone (National Telecommunications Commission, Sierra Leone Telecommunications Company), Solomon Islands (Solomon Telekom), South Africa (Independent Communications Authority of South Africa, Pygma Consulting, Sentech, Telkom South Africa, Universal Service and Access Agency of South Africa), Southern Sudan (Government of Southern Sudan), St Vincent Grenadines (National Telecommunications Regulatory Commission), Swaziland (Swaziland Posts and Telecommunications Corporation), Sweden (Ericsson), Tonga (Tonga Communications Corporation), Trinidad Tobago (Development Consulting Centre, Telecommunications Services of Trinidad and Tobago), United Kingdom (GSMA, SGS International), Vanuatu (Telecom Vanuatu Ltd.), Zambia (Zambia Telecommunications Company*).

* Restrictions may apply, please contact us at programmes@cto.int.