

NO	CODE	NAME	Bio	Pic	Paper	COMPANY	TITLE OF TUTORIAL	BIO DATA OF SPEAKER	ABSTRACT OF TUTORIAL
1	TTA:3G Data Networks: Design Issues & Case Studies	Simon Newstead	1	1	0	Juniper	3G data network – design issues & case studies [12 Day Tutorial]	Simon Newstead is the Mobile Product Manager for Juniper Networks in Asia Pacific, based in Hong Kong. In this role, Simon works together with leading wireless operators in Japan, Korea, China and other parts of Asia Pacific, helping to define and rollout new mobile data services, and in the design the network infrastructure to support them. Prior to this role, Simon was the network consultant based in Juniper's Melbourne office, leading efforts on Telstra. As part of this role, Simon worked in a number of areas, successfully helping implement a nationwide DSL network, as well as "RDN", now the largest MPLS network in Australia which supports both fixed as well as mobile services. He also helped design and implement Telstra's new Public WiFi Hotspots offering, launched earlier this year. Simon joined Juniper through the acquisition of Unisphere Networks, where he helped establish the Melbourne office & Australia-NZ operation. Before joining Juniper, Simon was a network consultant with Siemens for three years, half of which was spent at global headquarters in Munich. There, Simon worked in regional sales support, and worked together with leading operators including Deutsche Telecom, Tele Denmark and Colt, implementing new data	<p><u>Half-day tutorial:</u>  Drivers of mobile network evolution  Overview of 3GPP standards  Standards that impact Mobile backbone and GGSN infrastructure</p> <ul style="list-style-type: none"> <li>• Inter-working of Core network with external networks</li> <li>• 3G Services policy management</li> <li>• IPv6 and inter-working with IPv4</li> <li>• IP Multimedia Subsystem</li> <li>• IP Security</li> </ul> <p>Transition of interfaces to IP</p> <ul style="list-style-type: none"> <li>• Iu-CS, NB, Signaling</li> <li>• IP RAN</li> </ul> <p>3GPP and WLAN Integration</p> <ul style="list-style-type: none"> <li>• WLAN working group at SA2</li> </ul> <p>Service based charging and control</p> <p>IP UTRAN – design and implementation issues</p> <p>Bearer-independent CS architecture</p>
2	TTA:Traffic Engineering Beyond MPLS	Arman Maghbooleh				Cariden Technologies	Not Just MPLS: Practical Strategies for Traffic Engineering [1/2 Day Tutorial]	Arman Maghbooleh has extensive experience in network design consulting and tools development. He is currently the President of Cariden Technologies where he works with network operators to develop routing and traffic management solutions. Arman's academic interests are in approximation algorithms for NP-Hard combinatorial optimization problems. Arman holds an engineering bachelors degree from Harvey Mudd College and post-graduate degrees in Computer Science, Statistics, and Linguistics from Yale and Stanford Universities. Arman has recently presented talks at NANOG, MPLScon, and Opticom.	<p>Traffic Engineering is the control of routing to balance efficiency and performance objectives. It is an important and fundamental network operations task. Most recent discussions of the topic have centered on protocol enhancements for MPLS TE. In practice, however, TE is tightly bound with network topology and operational considerations which have led carriers to implement a broad range of traffic engineering techniques. In this tutorial, we provide a practical overview of traditional pre-MPLS TE practices, MPLS options, and new computer-aided approaches. Sample of discussed topics:</p> <ul style="list-style-type: none"> <li>* Some common topologies make TE trivial and useless.</li> <li>* TE savings from smart failure planning usually far outweigh benefits from load-balancing under non-ideal conditions.</li> <li>* Recent scientific advancements in pure IP control provide a scalable alternative to MPLS TE.</li> <li>* Dynamic MPLS TE can actually decrease network resiliency.</li> <li>* Hose-model services do not lend themselves to dynamic routing protocols.</li> </ul> <p>Pipe-model services are more forgiving of routing paradigm.</p>
3	TTF:802.11 Tech for Hotspots & WISPs	Matt Peterson				BAWUG	802.11 Tech for Hotspots & WISPs [Full Day Tutorial]	Matt Peterson is the founder of the Bay Area Wireless Users Group. BAWUG fosters education and networking between San Francisco area WLAN enthusiasts and companies. His work has been featured on TechTV, Wall Street Journal, Wired and other publications. Mr. Peterson is chief architect at Surf and Sip, a worldwide hotspot operator with 400+ locations.	<p>Mr. Peterson's workshop will provide a wealth of information on 802.11 Wireless LAN networking, particularly relating to WISP (last 3km) and Hotspot (last 10m) markets. Peterson has the unique perspective of consulting in both fee and free deployments. Topics include:</p> <ul style="list-style-type: none"> <li>* Business Models – What motivates VCs and the geeks?</li> <li>* Design – Site surveys, engineer/hireable links, cooperating with competitors, antenna choices</li> <li>* Hardware/Software Review – Snapshot of available commercial and "homegrown" solutions geared for hotspot WISP and other hybrid deployments</li> <li>* Security – Physical concerns, captive portals, 802.1x, RADIUS proxy, roaming with aggregators</li> <li>* Case Studies – Snapshot look at profit-driven companies and non-profit worldwide groups (BARWN, WirelessL, Inden, etc)</li> </ul> <p>Participants are expected to have working knowledge of IP routing and atleast some exposure to wireless networking (802.11b/a/g, hDA, Bluetooth, etc).</p>
4	TTF:Anti-Spam & Anti-Net Abuse	Suresh Ramasubramanian				APCAUCE	Anti Spam & Anti Net Abuse [Full Day Tutorial]		
5	TTF:Beyond Fault Management - Implementing a NOC	Jim Thompson				Cisco	Beyond Fault Management - Implementing a NOC [Full Day Tutorial]	James (Jim) Thompson, CCIE #1758, is a Network Consulting Engineer and founding member of Cisco's Advanced Services Network Availability Improvement Support (NAIS) organization. He has been instrumental in assisting many customers in network optimization and operational network support, as well as the development of documented industry best practices. Jim retired from the U.S. Army in 1991 as a Sergeant Major after 20 years of service. He worked C&I from unified command through division level, including special operations. Jim designed and built data networks that interfaced with fixed station entry points as well as tactical radio systems including mobile subscriber elements, HF, and TACSAT. Jim has a B.Sc. in Mathematics, an M.P.A. and a post-graduate certificate in Systems Analysis. He co-authored "Performance and Fault Management of Cisco Routers" from Cisco Press, and contributed to the August 2003 edition of Cisco's Packet Magazine.	<p>The session will begin by looking at the issues which make an organization need a formal NOC. This will be followed by the basics of fault management, how to move from these basic principles into practical thresholds and a diagnostic approach to maintaining the network. The use of statistical methods will be discussed as a means of analyzing the constantly growing mass of data the performance management systems produce. We will focus on developing a methodology using basic statistics and probability distributions to identify critical thresholds for a network. Another of our goals will be to help attendees understand the factors needed to drive down the mean-time-to-repair (MTTR).</p>
6	TTF:Constructing Internet Exchanges	Bill Woodcock				Packet Clearing House	Constructing Internet Exchanges [Full Day Tutorial]	Bill Woodcock is research director of Packet Clearing House, a non-profit research institute dedicated to understanding and supporting Internet traffic exchange technology, policy, and economics. Bill has operated regional and national Internet service provision and content delivery networks since 1989, and currently spends most of his time building Internet exchanges in developing countries.	<p>This tutorial introduces attendees to the technical, organizational, financial, and political knowledge necessary to construct an Internet Exchange (IX). We will cover needs assessment, organization of potential participants, site selection criteria, regulatory issues, physical requirements and construction, maintenance, and planning for growth. This is a full-day tutorial at an introductory level, appropriate for ISPs and IX organizers, as well as members of the telecommunications regulatory and economic development policy community.</p>
7	TTF:Convergence of Data Network Tech to a Common Packet Backbone	David O'Leary				Juniper	Convergence of Data Network Tech to a Common Packet Backbone [Full Day Tutorial]	David O'Leary has almost 20 years of industry experience, including both running networks and product development. 1989-89 - Carnegie-Mellon University and Pittsburgh Supercomputing Center - installing and supporting campus network, regional network to other university campuses and ARPAnet/NSFnet connections. 1989-92 - SURAnet Technical Manager, operations and engineering for largest NSF-funded regional network and FIXEast, one of the first Internet exchange points. 1992-98 - Cisco Systems - (Manager) Consulting Engineering, supporting university, large enterprise, and service provider customer product requirements and network designs. 1998-present - Juniper Networks Director, Consulting Engineering, working with customers on network design, product requirements, etc. Active on NANOG program committee since 1997. Active participant in IETF since 1990.	<p>This tutorial will focus on the evolution from multiple separate data networks with a service provider's infrastructure to a common backbone based on packet technologies. Motivation for this trend will be presented, along with transition models, and an overview of the various standards being developed. Tradeoffs between different technical and architectural options will be described. Options for Frame Relay, ATM, and TDM networks will be discussed, along with issues of integrating public Internet traffic with traffic over private data networks. Recommendations on techniques for delivering and interworking QoS will be provided. High device and network availability needed to support multiple services will be discussed.</p>
9	TTA: APNIC Internet Resources Management Essentials	John Hng, Champika Wijayasinga & Miwa Fujii				APNIC	Internet Resources Management Essentials [12 Day Tutorial]		<p>The APNIC Routing Registry is fully integrated in the existing APNIC Whois Database and it is available to all APNIC members. This tutorial provides opportunities for participants to learn features of Routing Registry, basics of Routing Policy Specification Language (RPSL), how to express routing policies using RPSL, and how to extract routing policies from the APNIC Routing Registry using RRCongfig tool. There will be some hands on demonstration on the use of RRCongfig. Topics covered are:</p> <ul style="list-style-type: none"> <li>- APNIC database recap</li> <li>- What is IRR</li> <li>- Why use an IRR? - APNIC database and the IRR - Using the Routing Registry - Benefit of using IRR</li> <li>- RPSL</li> <li>- RR objects review - Using RPSL in practice - IRR queries - Address prefix operator - AS-path regular expressions - Action specification - Syntax of policy actions and filters</li> <li>- RRCongfig</li> <li>- IRRToolSet options - RRCongfig command - Case studies - Using RRCongfig command</li> <li>- The rest of the IRRToolSet</li> </ul> <p>Intended audience: This tutorial is aimed at people who are already familiar with the APNIC Whois Database and want to learn more about the APNIC Routing Registry. A basic understanding of BGP routing and the APNIC Whois Database is assumed.</p>

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10	TTP: APTLD Technical Workshop	Chris Wright, Jeff Yeh & Hirofumi Hotta				APTLD	APTLD Technical Workshop [12 Day Tutorial]	Chris Wright is Chief Technology Officer of AusRegistry Pty Ltd, the company charged with running the .au domain name registry and its associated DNS and Whois services. Chris designed and managed the construction of the current AusRegistry EPP Registry system, which is still the only registry system in the world to feature "Real Time" dynamic DNS updates. Chris has a vast experience with DNS, before becoming the .au registry operator, AusRegistry (or Regstars/Asia as it was known then) was a well established, ICANN accredited domain registrar for whom which Chris designed and managed the DNS infrastructure. He consulted with and given many presentation to Australian government departments on good DNS principles and DNS management. Prior to this he was responsible for designing and building the front and back end of AusRegistry Group's current web hosting and domain registration system. He has a degree in computer science and a vast array of experience as a network engineer and software developer. Previously he has been involved in the setup up of networking in schools and software development in the education sector. He has had significant involvement in the development numerous systems	
							APTLD Technical Workshop (contd)	Jeff Yeh has joined TWNIC (Taiwan Network Information Center) since February 2002. He is mainly responsible for TWNIC domain name registration system and .tw registry database maintenance. He is a member of TWNIC R&D team, devoting in new internet standards and new technology. He is also positioning as ISOC Taiwan Chapter internet technology consultant. His education background is as below: Bachelor of Information Engineering, Fu-jen Catholic University, Master of Computer Science and Engineering, National Sun Yat-sen University; Major in Image Processing, Networking.	
							APTLD Technical Workshop (contd)	Hirofumi Hotta was Chairman of Asia&Pacific Internet Association in 2000-2001. From 1999, he was a member of Names Council of ICANN Domain Name Supporting Organization for 2 years. He was one of the startup members of PPS, which is a .JP registry from 2001, where he is responsible for business planning including IDN and ENUM. He was a member of ICANN IDN registry implementation committee and he is Vice-chairman of ENUM Trial Japan (ETJP).	
11	TTP: Introduction to IPv6	Jeff Doyle	1	0	Cannot submit paper on time	Juniper	Introduction to IPv6 [Full Day Tutorial]	Specializing in IP routing protocols, MPLS, and IPv6, Jeff Doyle has designed or assisted in the design of large-scale IP service provider networks throughout North America, Europe, Japan, Korea, and the People's Republic of China. Jeff is the author of CCIE Professional Development: Routing TCP/IP, Volumes I and II, is an editor and contributing author of Juniper Networks Routers: The Complete Reference, and is the author of a new series of books on large-scale networking. Jeff has presented numerous corporate seminars, and has also spoken at NANOG, JANOG, APRICOT, and at IPv6 Forum conferences.	This 1-day tutorial covers the business and technical drivers behind IPv6, and introduces the attendee to the basics of IPv6 addressing, packet formats, neighbor discovery, and address autoconfiguration. With this essential knowledge, the attendee is then introduced to more advanced topics such as transition mechanisms, DNS, IPv6 routing, and multihoming issues. The tutorial concludes with a discussion of IPv6 network design and a look at several working IPv6 networks from around the world. Throughout the tutorial, the technical discussions are reinforced with practical demonstrations of IPv6 configurations on a variety of operating systems and platforms. Topics: 1. Drivers for IPv6 2. Addressing Basics a Demonstration: Address Configuration of Hosts and Routers 3. Header Formats and Extension Headers 4. ICMPv6 5. Neighbor Discovery a Demonstration: Neighbor Discovery Protocol Configuration 6. Address Autoconfiguration a Demonstration: Host Address Autoconfiguration b. Demonstration: DHCPv6 Configuration 7. Routing IPv6 a Demonstration: Static Routes and RIPng b. Demonstration: OSPFv3 and IS-IS Configuration c. Demonstration: MBGP for IPv6 8. Multihoming Issues 9. IPv6 Multicast a Demonstration: Multicast Configuration 10. Transition Mechanisms a Demonstration: IPv6 over GRE Tunnels b. Demonstration: IPv6 over MPLS LSPs c. Demonstration: 6to4 configuration d. Demonstration: Transition Issues 11. Transition Issues 12. IPv6 Network Design 13. Case Studies
12	TTP: Network Security: The principles of Threats, Attacks, Intrusions	Ray Hunt	1	1	1	University of Canterbury	Network Security: The principles of Threats, Attacks, Intrusions [Full Day Tutorial]	Ray Hunt is an Associate Professor specialising in Networks and Security. He is a member of the Department of Computer Science at the University of Canterbury, New Zealand. His areas of teaching and research are computer networks and network security. In addition he has provided numerous training courses on Networks and Security for the industry in Australia, New Zealand, Singapore, Hong Kong, Thailand, Malaysia and Taiwan. Further, he has addressed a variety of conferences in Australia, Singapore, China, Hong Kong, U.S.A. and Europe. He has acted as a telecommunications consultant for a number of telcos and other companies in the Asian-Pacific region and works as an adviser on aspects network architecture, security and design as well as advising industries on a wide range of telecommunication topics. He is well known in Asia in particular where he has run training workshops over the last 15 years for companies such as Fujitsu, Routers, AT&T, Vodafone and others. He has visited Asia over 70 times in the last 15 years providing a wide range of training and education workshops in areas of networks and security. Prior to being with the University of Canterbury, Ray Hunt worked for the airline industry where he designed and built internal	Internet Intranet architectures are built upon a pair of protocols designed over 25 years ago and to which virtually no consideration was given to security. Although the IPv6 networking family has been designed to address this issue, the majority of existing network infrastructure is subject to substantial threats. This tutorial examines the current security risks resulting from using TCP/IP by network providers and ISPs and how these threats related to traffic carried by the providers on behalf of their customers can have such devastating effects. Further this tutorial classifies the type of attacks possible focusing particularly on both wireless local and wide area networks. These threats are largely centered on IP sniffing, IP spoofing, TCP hijacking and Distributed Denial of Service attacks. Although firewalls have been designed to provide protection for many of these services in wireless networks, it is now recognised that they can be broken and that IDS (Intrusion Detection Systems) are necessary to complete the TCP/IP security framework. This tutorial will examine IDS architectures and demonstrate the techniques by which TCP/IP vulnerability can be detected. The tutorial will include a live demonstration of attacks on the TCP/IP protocol suite and show how such attacks
13	TTP: Introduction to SIP & VoIP Open Source	Ruwan Silva				Lanka Communications Services	Introduction to SIP & VoIP Open Source [12 Day Tutorial]	Graduate of BSc (Eng) (Computer Engineering) from University of Peradeniya, Sri Lanka Undergraduate project: Designing of a user agent for communicating with a Session Initiation Protocol (SIP) server Professional Experience: Implementation of Open Source SIP servers (VOCAL and SER) at the company Experience in VoIP technologies based on H.323 in cooperate networks using Products such as Cisco, Mitel, TekDigital Other: Implementation of WCCP versions 1 and 2 with Squid Expertise knowledge in Linux	The Session Initiation Protocol (SIP) is getting quite popular among VoIP research groups as well as companies, over the past couple of years. This paper attempts to provide an introduction to SIP and to illustrate its architecture. Further it tries to explore some of the Open Source implementations of SIP, namely the Voida Open Communication Application Library (VOCAL) and the SIP Express router (SER).
14	TTP: Next Steps in Broadband Services & Networks Designs	Robert Healey				Juniper	Next steps in broadband services and network designs [12 Day Tutorial]	Robert Healey is the product manager for edge routing / broadband services for Juniper in Asia Pacific. In this role he helps design and plan advanced broadband networks with leading carriers in Japan, China and throughout the rest of APAC. Prior to joining Juniper Robert was technical marketing manager for Unisphere Networks, and previously worked for MCI / Worldcom.	As Broadband usage hits new highs for access speed, subscriber count and access methods, we take a look at the evolution of broadband services beyond basic internet access- what's been deployed? Where is the revenue opportunity? What services are planned for deployment in the next six to twelve months? Linked to these services we will talk through the following important topics: Access models for subscriber management - (Moving away from PPPoE but still need control of your subscribers) Delivering common services across multiple access platforms on ADSL, VDSL, Metro, Wireless LAN and mobile The role of Multicast in Broadband Networks How will voice and video affect the broadband network and how to manage the impact (while maintaining broadcast quality)