

Layer 2 Attacks and Mitigation Techniques

Yusuf Bhajji, Cisco Abstract Layer 2 Attacks and Mitigation Techniques session focuses on the security issues surrounding Layer 2, the data-link layer. With a significant percentage of network attacks originating inside the corporate firewall, exploring this soft underbelly of data networking is critical for any secure network design. Security issues addressed in this session include ARP spoofing, MAC flooding, VLAN hopping, DHCP attacks, and Spanning Tree Protocol concerns. Common myths about Ethernet switch security are confirmed or debunked, and specific security lockdown recommendations are given. Attack mitigation options include the new DHCP snooping and Dynamic ARP Inspection (DAI) functionality. Attendees can expect to learn Layer 2 design considerations from a security perspective and mitigation techniques for Layer 2 attacks. This session is for network designers, administrators, and engineers in all areas of data networking.

Abstracts

- Network Management and NOC Workshop
Hervey Allen (NSRC), Phil Regnaud (NSRC), Chris Evans (Delta-Risk)
- VOIP Deployment Workshop
Jonny Martin (PCH), Vicky Shrestha (PCH), Daniel Griggs (FX Networks)
- Network Security Workshop
Damien Holloway (Juniper Networks), Kunjal Trivedi (Cisco), Merike Kaeo (Doubleshot Security)
- ISP Routing Workshop using IPv4 and IPv6
Gaurab Raj Upadhaya (PCH), Amante Alvaran (APNIC), Shankar Vridhagiri
- Advanced Routing - BGP Multihoming with IPv4 and IPv6
Philip Smith (Cisco), Mark Tinka (Global Transit)
- Toward The Internet 2.0
Hiroshi Esaki, Ph.D.
- Advancing the Philippines' Internet Infrastructure
William Torres, Ph.D.
- Integrating IP Wireless Sensor Networks
Patrick Grossetete, Archrock
- Lessons Learnt from the Beijing Olympic Games Website Measurement
Rocky K. C. Chang, The Hongkong Polytechnic University
- A technical demo and overview of .tel
Jim Reid (Telnic)
- BGP IN 2008 - what's changed
Geoff Huston (APNIC)
- IPv6 Traffic levels on Hurricane Electric's backbone
Martin Levy (Hurricane Electric)
- JANET's 40Gbps backbone
Rob Evans (JANET)
- From IPv4 only to v4/v6 Dual Stack
Shin Miyakawa (NTT)
- How to Keep CGNs from Breaking the Internet
Randy Bush (IJJ)
- IPv6 Deployment at IJJ
Yoshinobu Matsuzaki (IJJ)
- Session aware NAT
David Miles (Alcatel-Lucent)

- IANA and DNSSEC at the root
Richard Lamb (IANA)
- IPv6 at Google: lessons learned, state of the art, and the road to deployment
Lorenzo Colitti(Google)
- Euro-IX update
Serge Radovic (Euro-IX)
- IPv6 at Monash University
John Mann(Monash University)
- What can IXPs do for IPv4/IPv6 route exchange?
Takabayashi Takejiro (Japan Internet Exchange Co., Ltd.) and Mawatari Masataka (Co-author)
- What can IXPs do about IPv4 exhaustion?
MAWATARI Masataka (Japan Internet Exchange Co., Ltd.) and TAKABAYASHI Takejiro
- DNS-OARC's Open DNSSEC Validating Resolver
Duane Wessels(DNS-OARC)
- AMS-IX Update
Cara Mascini(AMS-IX)
- DNSSEC in 6 minutes
Joao Damas (ISC)
- NIXI - Internet Exchanges in India
Amitabh Singhal,NIXI
- IPv6 - IPv4 Co-Existence: IETF Report
Jari Arkko, Ericsson Research, IETF
- Rogue DNS servers - a case study
Feike Hacquebord,Trend Micro
- Building a very large scale compute system for organizing the worlds information and making it universally accessible
Vijay Gill
- Mobile Backhaul Architecture Options
Rishi Mehta ,Redback Networks
- Membership Development
Tomas Marsalek, NIX.CZ
- Broadband Forum v6 Home Networks
David Miles, Alcatel-Lucent
- BGP Routing Scalability Considerations
Danny McPherson,Arbor Networks, Inc. Co-author: Shane Amante, Lixia Zhang
- 2008 Infrastructure Security Report
Danny McPherson,Arbor Networks, Inc.
- 32-bit ASNs
Chris Malayter, Switch&Data, Co-author: Greg Hankins , Force10 Networks
- The Internet Regulatory Environment in Saudi Arabia
Dr. Ibraheem S. Al-Furaih (CITC)
- Tutorial: Introduction to IPv6
Kurtis Lindqvist (NetNod)
- Tutorial: BGP Multihoming Techniques
Philip Smith (Cisco)
- Tutorial: BGP Techniques for Service Providers
Philip Smith (Cisco)
- Tutorial: Troubleshooting BGP
Philip Smith (Cisco)
- Tutorial: Network Core Infrastructure - Best Practices
Yusuf Bhaiji (Cisco)
- Tutorial: Anatomy of a network attack, network forensics, network attack and defense

APNIC Training Team and Team Cymru

- Tutorial: Internet Routing Registry
APNIC Training Team
- Tutorial: MPLS Service, Applications & Deployment Best Practices
Santanu Dasgupta (Cisco Systems) and Kasu Venkat Reddy
- Tutorial: Layer 2 Attacks and Mitigation Techniques
Yusuf Bhaiji (Cisco)
- Tutorial: Managing Voice Quality in Converged IP Networks
Faisal Chaudhry (Cisco Systems)
- Tutorial: Internet Resource Management Essentials (IRME)
APNIC Training Team
- Tutorial: DNSSEC Deployment
Phil Regnauld and Hervey Allen (Network Startup Resource Center)
- Tutorial: MPLS-based Metro Ethernet Services
Paresh Khatri (Alcatel-Lucent)
- Tutorial: IPv6 Deployment
Mark Tinka (Global Transit International)
- Tutorial: IS-IS Deployment (Dual-Stack)
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