

HKNOG

Hong Kong

Network Operators' Group

18th Mar 2016



*NOGs Around the World



- Regional
 - NANOG, APRICOT/APOPS, SANOG, MENOG
- Local
 - JANOG, AusNOG, NZNOG, MYNOG, SGNOC, IDNOG, BDNOG
- Not many participants from HK to these events...

Formation of HKNOG



- For Network Operators (local, regional or global) having presence in HK
 - Have ASN(s) and portable IP addresses
- For technical and half-technical people based in HK
 - To exchange knowledge and information
 - Best practices, new trends and so on
 - To enhance overall quality of Internet infrastructure
 - Performance, security, stability and so on
 - To help do trouble-shooting and solve problems together when needed
- Topics to cover
 - Anything related to technical and operational issues faced by network operators
- Not for sales and marketing
 - No sales talks
 - Be as neutral as possible

Possible Format & Activities



- Mini-events
 - Half day max, once every 2-4 months
 - Need good speakers, local or overseas
 - Need sponsors and venues
- Annual events
 - ≥ 1 day (with or without workshops)
- Domain name: hknog.net
- Website: www.hknog.net
- Mailing list: hknog@googlegroups.com (to be changed to use hknog.net)
 - Please sign up to keep updated
- Others channels: Facebook / LinkedIn Groups
- Language
 - English (or Cantonese if all attendees are Cantonese-speaking)
- Low cost / Grass-root operations
 - Keep it simple and small, at least initially
- May or may not do incorporation
 - If incorporated, need more formal membership arrangement

Volunteers



- To organize the activities, to determine the programs and to find speakers, sponsors, venues and so on, plus to do other admin work such as managing website and mailing lists
- Initial Group / Program Committee:
 - Che-Hoo CHENG (CH)
 - Howard CHEUNG
 - Wai-Kay SHIU (WK)
 - Kam-Sze YEUNG (Kams)
 - Raphael HO (Raf)
 - Eric FAN
 - Chris TUNG
 - Welthia CHUNG
 - Kenneth CHO
 - **Connie CHAN**
 - *Most of us involved in setting up the conference network of APRICOT-APAN 2011 held in HK with 8 x 10GE external connectivity and 100GE trial*
- **We need more volunteers!!!**

HKNOG 0.1

on 02 Sep 2013



- *Formation of HKNOG*
- Peering in Hong Kong
 - Che-Hoo Cheng, CUHK/HKIX
- APNIC Whois/IRR
 - Champika Wijayatunga, APNIC
- *Afternoon tea*
- CDN, Peering and IPv6
 - Kam-Sze Yeung, Akamai
- Routing Control at Peering Points
 - Raphael Ho, Equinix
- *Open mic*
- **Many thanks to APNIC**

HKNOG 0.2

on 14 Apr 2014



- *Opening*
- Next Generation Network and Services
 - Mr. LO Sui Lun & Mr. Mike NG, HKBN
- APNIC Updates and RPKI Service
 - Mr. George KUO, APNIC
- *Coffee Break*
- ISPs and Cyber Security
 - Mr. S.C. LEUNG, HKCERT
- Introduction of DNSSEC
 - Mr. Josh WONG, PISA
- *Open mic*
- **Many thanks to HKBN**

HKNOG 1.0

– Morning Agenda



- 9:15 ***Opening – HKNOG***
 Video Messages from Honorable Charles MOK, JP
 Morning Keynote
- 9:20 BGP Routing: Is 512 a Magic Number – Mr. Geoff Huston of APNIC
 Security
- 10:00 Worldwide Security Report and the latest large-scale DDoS attack trends
 – Mr. C.F. Chui of Arbor Networks
- 10:30 Attacks and Mitigation Methods in Huawei's Perspective
 – Mr. Martin Liu of Huawei
- 11:00 *Tea Break*
 Technology
- 11:20 Software Defined Network – Eric Choi of Brocade
- 11:50 SDN in OpenStack - A real-life Implementation – Mr. Leo Wong
- 12:20 SDN in SP Wide Area Network – Mr. Aaron Tong of Juniper Networks
- 12:50 *Lunch Break (HKISPA Talk)*

HKNOG 1.0

– Afternoon Agenda



Afternoon Keynote

13:50 DDOS attacks in IPv6 World – Mr. Tom Paseka of CloudFlare

Technology

14:30 EDNS0 Client Subnet – Mr. Matt Jansen of Akamai

15:00 Optical Transport Technologies and Trends – Mr. Dion Leung of BTI

15:30 *Tea Break*

General Topics

15:50 Extending the Life Cycle of Equipment – Mr. Zimin Chen of Curvature

16:05 Performance Benefits Of Peering – Mr. Ritesh Maheshwari of LinkedIn

16:35 Cable Systems - how to choose Submarine Cables and how we repair cable cuts
– Mr. Anders Gustafsson of TATA Communications

17:05 IPv6 Myth and Deploy 360 – Mr. Chris Grundemann of ISOC

17:50 ***Closing – HKNOG***

18:00 *Social Event*

HKNOG 1.1

– Agenda



- 14:00 **Welcome – HKNOG**
- 14:05 **Registry:** APNIC Policy Updates and IPv4 Address Transfer – Mr. Zen Ng of APNIC
- 14:45 **Measurement:** Internet Measurement – Rocky Chang of PolyU
- 15:00 **Interconnection:** HKIX IPv4 Address Renumbering and Updates – Che-Hoo Cheng of CUHK/HKIX
- 15:30 **Tea Break**
- 16:00 **Routing:** BGP Anycast for More Than Just DNS – Gaurab Raj Upadhaya of Limelight
- 16:35 **Technology:** Intelligent WAN (IWAN) Architecture – Benjamin Lee of Cisco
- 17:00 **Security:** Honeypot – Peter Cheung of HoneyNet – PISA
- 17:25 **Closing – HKNOG**
- 18:00 **Social Event – Dan Ryan's**

HKNOG 2.0

– Morning Agenda



9:15-9:20	Welcome by HKNOG
9:20-10:00 APNIC	Morning Keynote by APNIC – “Why Measure?” – by Geoff Huston,
10:00-10:30	Application Engineered Routing – by Eric Lam, Cisco
10:30-11:00 HKPF	How Network Operators can Combat Cyber Crime – by Sean Lin,
11:00-11:20	Break
11:20-11:50	Impact of Earthquake on Nepal’s Internet 2015 – by Rupesh Kumar
Thapa, MICET Foundation	
11:50-12:20	Mobile Internet in Japan, and Asia – by Daishi Shima, BBIX
12:20-12:50 Telstra	Technical challenge in merging IP networks – by Sung Sai-ping,

HKNOG 2.0

– Afternoon Agenda



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|-------------|---|
| 14:00-14:30 | Combating DDOS and Why peering is important in Asia – by Marty Strong, CloudFlare |
| 14:30-15:00 | Vulnerable Internet “Things” Fuel DNS-based DDOS – by Bruce Van Nice, Nominum |
| 15:00-15:30 | Continuous Vulnerability Monitoring for Internet Service Providers – by Disney Cheng, Tenable |
| 15:30-15:50 | Break |
| 15:50-16:20 | Global Cloud Network Evolution – by Peter Lam, Infinera |
| 16:20-16:50 | Green Data Centre – by Raphael Ho, Equinix |
| 16:50-17:30 | JANOG / Improving Interconnect in Japan, and Beyond – by Seiichi Kawamura, JANOG / BIGLOBE |
| 17:30-17:35 | Closing by HKNOG |
| 18:00-20:00 | Social Event at Dan Ryan’s – Equinix |

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Date: 18 Mar 2016 (Fri)

Venue: Admiralty Conference Centre

Time: 14:00 – 18:00

Gold Sponsors:



Silver Sponsors:



Enterprise Solutions



Bronze Sponsors:



Social Sponsor:



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– Agenda



- 14:00 **Welcome – HKNOG**
- 14:05 **OTT:** OTT Traffic and Trend – Yoshinobu Matsuzaki of IJ
- 14:30 **OTT:** Pain Point on Live Stream in HK – Eric Fan of UDomain
- 14:55 **OTT:** Netflix Open Connect – Ian Chiu of Netflix
- 15:20 **Cloud:** Build World on Cloud Together – Dr. Derek Wang of AliCloud Int'l
- 15:45 **Tea Break**
- 16:05 **Governance:** IANA Stewardship Transition – What relevance does it have? – Izumi Okutani of JPNIC
- 16:30 **Technology:** The Path to Disaggregation – Fahim Sheikh of BTI
- 16:55 **OTT:** Preparing for the Future of the Internet: Performance and Security Matter – Ivan Cheng of Level (3)
- 17:20 **Security:** Pulse on DDoS Threats: Latest Findings from the World Infrastructure Security Report – CF Chui of Arbor Networks
- 17:40 **Closing – HKNOG**
- 18:00 **Social Event – Dan Ryan's**

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on 18 Mar 2016



- **Many thanks to the 10 sponsors and all the speakers to make it happen**
- **Gold Sponsors:**
 - **Alibaba, APNIC, and PCCW Global**
- **Silver Sponsors:**
 - **BBIX, BTI, HKBN and Seiko**
- **Bronze Sponsors:**
 - **Arbor Networks and NTT**
- **Social Sponsor:**
 - **Equinix**

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– Logistics



- Please remember to fill in and submit the Evaluation Form before you leave
- Drink and Snacks will be served during the tea break
- Social event will be at Dan Ryan's in Pacific Place
 - Please join us for networking
- Please signup our mailing list, Facebook page and LinkedIn group

Social Event – Dan Ryan’s

