



# APRICOT 2014

THE ASIA PACIFIC'S PREMIER INTERNET SUMMIT



**PETALING JAYA, MALAYSIA**

18–28 February 2014

Organized by **apia**  **APNIC**

Sunway Resort Hotel & Spa

**APNIC 37**



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 **APRICOT 2014**







## Welcome Message

Dear APRICOT Delegate,

As you will no doubt be aware, APRICOT 2014 was originally intended to be held in Bangkok. But with the escalating political protests in Bangkok during December 2013 and January 2014, and the Thai Government's declaration of a state of emergency for the city of Bangkok in mid-January, it was with a very heavy heart that the APIA Board accepted the advice of our hosts, True and NECTEC, to relocate APRICOT 2014. The APIA Board are sorely disappointed at the lost opportunity for the Internet industry in Thailand, as this was to be our first return to Thailand since APRICOT 2002. The Board very much hopes to bring the conference back to Thailand in more positive circumstances in the future.

APRICOT's backup venue, in times of emergency, has traditionally been in Kuala Lumpur, Malaysia; it is centrally located in our region, easy to travel to for most, and has a large number of suitable venues to hold our conference. APNIC, who now operates the Secretariat on behalf of APIA, agreed to take on the challenge of relocating an almost completely prepared conference from Bangkok to Petaling Jaya (a satellite city of Kuala Lumpur).

Preparing the venues and infrastructure for a 500+ person conference as diverse and varied as ours is no small undertaking and the team, superbly led by Molly Cheam, has performed many miracles to make APRICOT 2014 a reality. The team includes staff at APNIC as well as the many volunteers who contribute their time and talents to APRICOT year in year out. The APIA Board greatly appreciates all contributions made towards the preparations and success of this event.

I would like to welcome all participants to APRICOT 2014. The regular programme of workshops continues, with 5 workshops on offer covering Routing, Advanced BGP,

Network Management, MPLS, and Security. The second week of the APRICOT summit includes tutorials and conference sessions, with keynotes from Professor Kanchana Kanchanasut, Dr Nii Quaynor and Pindar Wong.

The APIA Board would like to thank the tremendous support which True and NECTEC have provided to APRICOT in the months of preparation work during 2013. The Board would also like to thank APNIC for their considerable efforts in moving the conference. And the Board would like to thank the many volunteers from the community in the APRICOT Management, Programme, Fellowship and Technical Committees who have freely given their time and expertise to help create the APRICOT experience.

I hope all APRICOT 2014 delegates have an enjoyable conference and most importantly are able to share their experiences with fellow delegates and with colleagues who were unable to participate this year.

**Philip Smith,**  
Chairman APIA Board



## Welcome Message

It gives me great pleasure to welcome you to Petaling Jaya and APRICOT 2014. I believe this year is set to be an important one in the Internet's history and it is exciting to really begin the year in earnest at APRICOT 2014.

Many commentators have declared 2014 to be the year in which the "Internet of Things" (IoT) will become reality, with Internet-connected cars, TVs, toasters, tennis racquets and more entering our lives. Predictions vary wildly as to the number of devices connected to the Internet by 2020: anywhere between 26 billion and a huge 200 billion devices!

While the numbers are debatable (and sometimes entertaining), the serious underlying fact is a vastly increasing amount of devices are connecting to the Internet and, as we all know, demanding IP addresses. How network operators

handle this coming explosion in devices will be interesting to watch. IPv6 was effectively made for the IoT, and the IoT will be seriously constrained without it. Will operators accelerate the transition to IPv6; will they continue to increase network complexity by relying on Carrier Grade NAT (CGN); or will they do both, in a balanced dual-stack approach?

You'll hear plenty about the transition to IPv6 during the week at APRICOT 2014, and in particular Wednesday's plenary session the "Anatomy of CGN" should spark some healthy debate. Also on the agenda during the conference are DNSSEC, increasingly coming into focus in today's security environment; and IP address policies, with several new proposals up for discussion during the APNIC policy sessions.

Alongside the latest technology and policy content, APRICOT 2014 will also address the future of Internet co-operation, following the Montevideo Statement, the IGF in Bali, and the ongoing discussions on /1net. How the debate around Internet co-operation evolves in 2014 will be largely up to you, the participants in the Internet community. What are your views on how the Internet should develop in future? How do you believe IP addresses should be managed? Where should the global community discuss and address these issues? Are you and your

organization willing to play an active role in the future of Internet co-operation in the Asia-Pacific and beyond?

Following the tradition of recent years, there will be an i-Governance session at APRICOT 2014 on Wednesday, where some of these questions will be discussed with a diverse and distinguished panel. I strongly encourage you to attend this session and take an active role – not only do we want to hear your views, but your voice has an equal impact in our shared multistakeholder model.

As usual, those who could not physically join us here in Petaling Jaya can still participate in APRICOT 2014 through a variety of online channels. You can enhance your conference experience by getting involved in the event online too, via the APRICOT website or on social media, and I encourage you to use the #apricot2014 hashtag on all your social media posts to add to the discussion.

I do hope to meet with as many of you as possible during the week and hear your thoughts on what's going on in your organization. Enjoy APRICOT 2014 and the warm hospitality of our Malaysian hosts.

**Paul Wilson**  
Director-General, APNIC

# Conference Highlights

## Anatomy of a CGN

09:00-10:30  
Wednesday, 26 February 2014  
Grand Caymans, Level 10

Hear about the latest updates on CGN from network operators and scientists who are testing and monitoring CGN use. Be prepared for a robust discussion among panellists and audience participants.

## APIPv6TF and IPv6 Readiness Measurement BoF

16:00-19:00  
Wednesday, 26 February  
Grand Caymans, Level 10

This is a collaborative BoF, held together for the first time at APRICOT 2014. Participants will get an update from various economies on their v6 deployment and measurement methods and outcomes.

## IPv6 Tutorials

### NEW - 464XLAT: Breaking Free of IPv4

16:00-17:30  
Tuesday, 25 February  
Bahamas 1, Level 12

Attend the world's first 464XLAT Tutorial with Cameron Byrne from T-Mobile. This tutorial will review the 464XLAT architecture (RFC6877) and how it applies to mobile and broadband networks to enable growth beyond IPv4, while minimizing translation, tunnelling and positively incentivizing end-to-end IPv6 deployment.

### IPv6 in Mobile Networks

14:00-15:30  
Tuesday, 25 February  
Bahamas 1, Level 12

This tutorial complements the 464XLAT tutorial and focuses on a big picture of IPv6 implementation in mobile networks.



# Conference Highlights

## **From Governance to Cooperation: Decoding the Puzzle**

14:00-15:30  
Wednesday, 26 February  
Grand Caymans, Level 10

Share your thoughts on the ongoing discussions about the evolution of global multistakeholder Internet cooperation. This session is a follow-up on the Montevideo Statement, and includes discussion on Net Mundial and /1net.

## **APNIC 37 Policy Special Interest Group (SIG)**

09:00-15:30  
Thursday, 27 February  
Grand Caymans, Level 10

Discuss the latest proposals and have your say in how Internet number resources are managed.

## **APNIC 37 APNIC Member Meeting**

09:00-15:30  
Friday, 28 February 2014  
Grand Caymans, Level 10

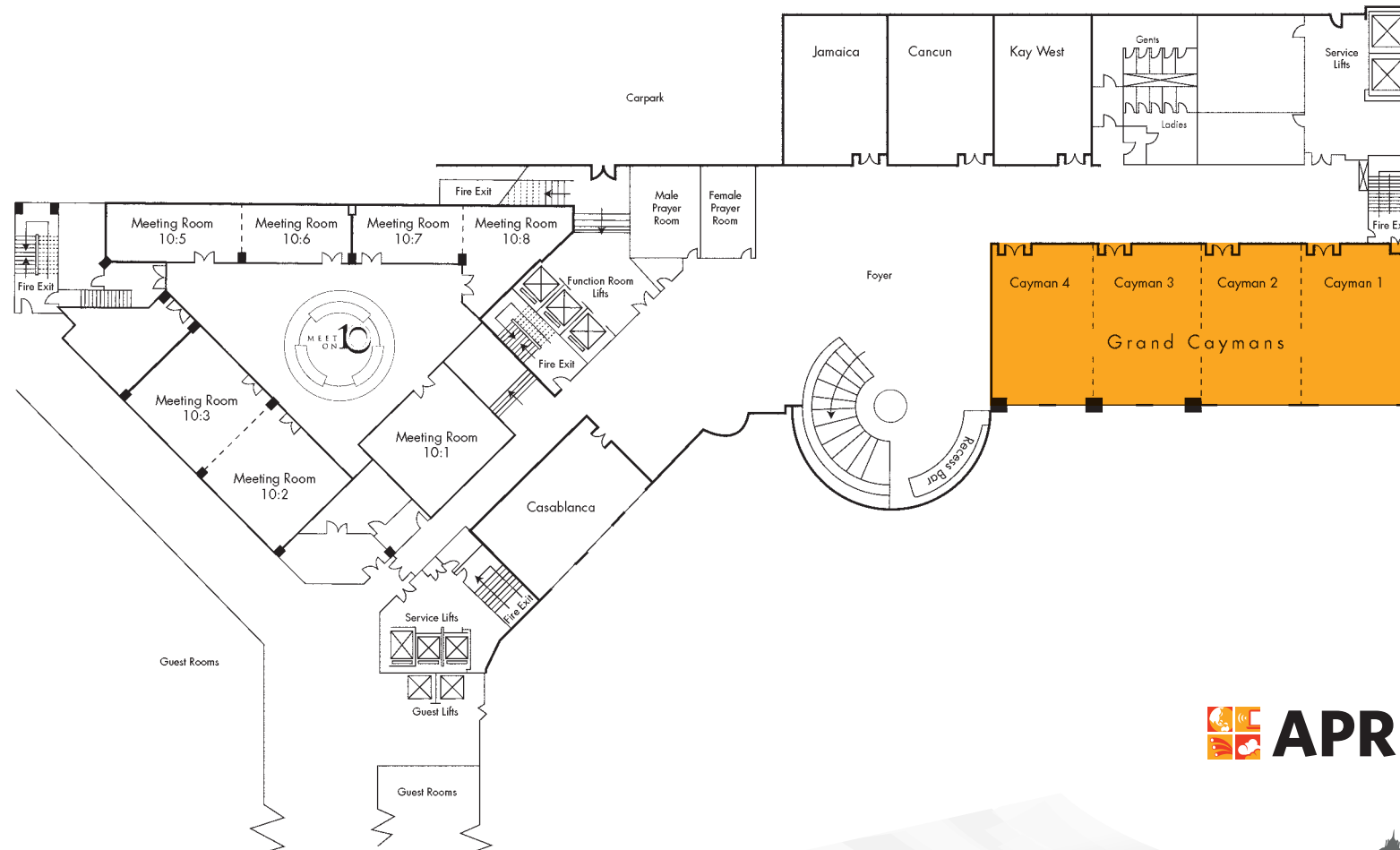
Get the latest updates on APNIC's operations and activities.

 **APRICOT2014**



# Venue Layout

## Level 10



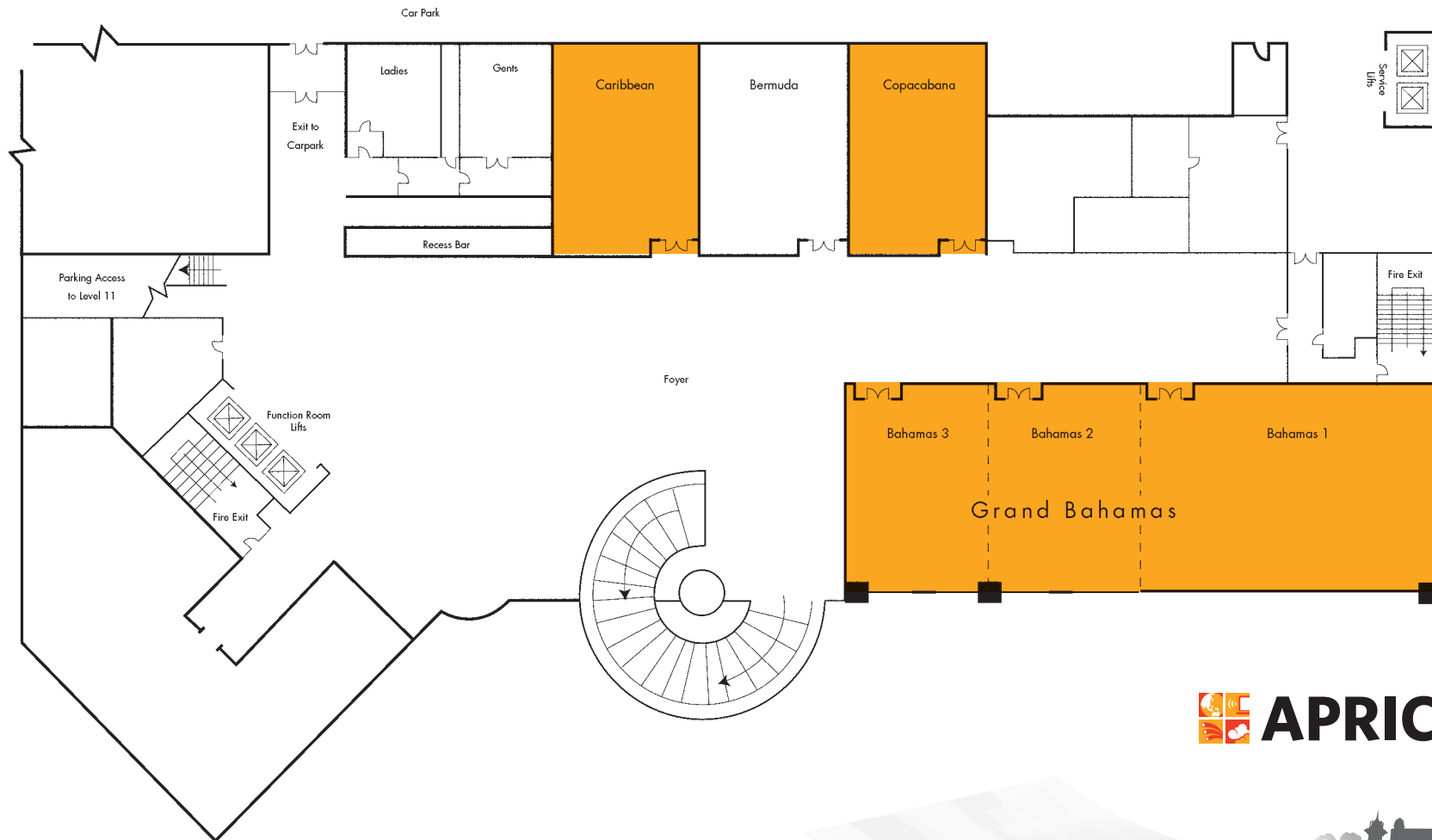
 **APRICOT 2014**





# Venue Layout

## Level 12

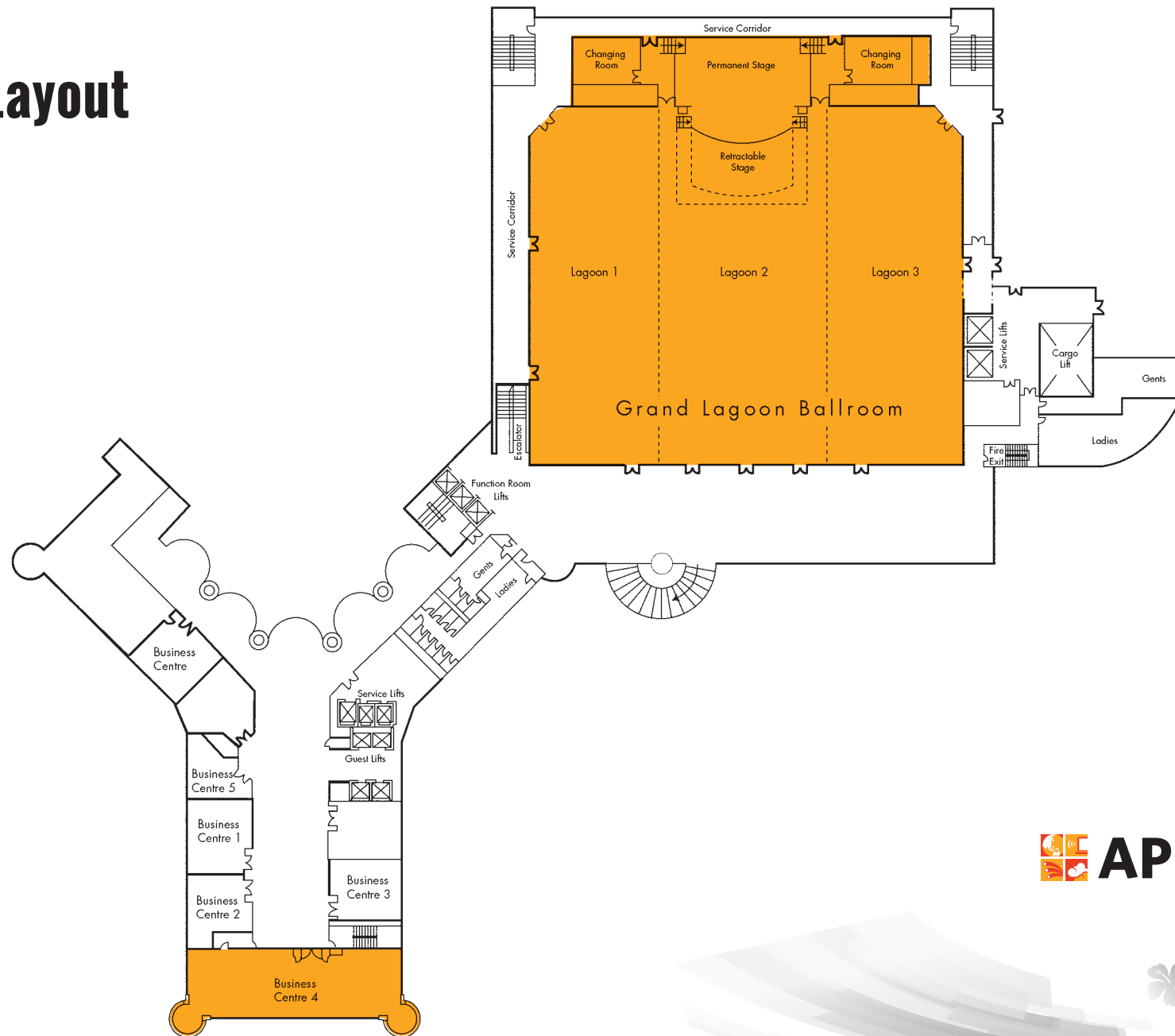


 **APRICOT 2014**



# Venue Layout

## Level 15



 **APRICOT 2014**



# Conference Timetable



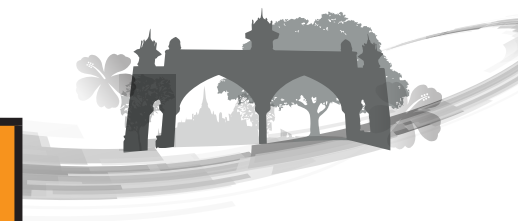
## MONDAY FEB 24, 2014

TIME	ROOM LAGOON 2 LEVEL 15	ROOM GRAND CAYMANS LEVEL 10	ROOM BAHAMAS 1 LEVEL 12	ROOM BAHAMAS 2 & 3 LEVEL 12	ROOM BUSINESS CENTRE 4 LEVEL 15	SOCIAL EVENTS
07:00 - 09:00						
09:00 - 10:30			APNIC IRM Tutorial (I)	DNS/DNSSEC Tutorial	APTLD IGov	
10:30 - 11:00	MORNING TEA					
11:00 - 12:30		ICANN Update	APNIC IRM Tutorial (II)	DNS/DNSSEC Tutorial		
12:30 - 14:00	LUNCH - LAGOON 3, LEVEL 15					
14:00 - 15:30	OPENING CEREMONY & Plenary					
15:30 - 16:00	AFTERNOON TEA					
16:00 - 17:30	APOPS Plenary (I)					
17:30 - 19:00						Newcomers Lobby Lounge
19:00 - 22:00						APRICOT Opening Social

### KEY

	APRICOT
	APNIC
	SOCIAL EVENT
	OTHER EVENTS






# Conference Timetable



## TUESDAY FEB 25, 2014

TIME	ROOM LAGOON 2 LEVEL 15	ROOM GRAND CAYMANS LEVEL 10	ROOM BAHAMAS 1 LEVEL 12	ROOM BAHAMAS 2 & 3 LEVEL 12	ROOM BUSINESS CENTRE 4 LEVEL 15	SOCIAL EVENTS
07:00 - 09:00						
09:00 - 10:30	APOPS (II)	Infrastructure	Traffic Engineering	NIR SIG		
10:30 - 11:00	MORNING TEA					
11:00 - 12:30	Peering Forum (I)	Conference: Security Session 1	IPv6 Transition Technologies	APNIC NIR HM & Tech Workshop		
12:30 - 14:00	LUNCH - LAGOON 1, LEVEL 15					
14:00 - 15:30	Peering Forum (II)	NOG Reports	IPv6 in Mobile Networks Tutorial	Network Security Tutorial		
15:30 - 16:00	AFTERNOON TEA					
16:00 - 17:30	Peering Forum (III)	APNIC Services	464XLAT Tutorial	Network Security Tutorial 2		
17:30 - 19:00		IPv4 address leasing BoF	Network Security Devices IPv6 Verification BoF	Disaster Emergency Communication BoF		Peering Cocktail Lobby Lounge
19:00 - 22:00						

### KEY

	APRICOT
	APNIC
	SOCIAL EVENT
	OTHER EVENTS
	CLOSED EVENTS



# Conference Timetable



## WEDNESDAY FEB 26, 2014

TIME	ROOM GRAND CAYMANS LEVEL 10	ROOM BAHAMAS 1 LEVEL 12	ROOM BAHAMAS 2 & 3 LEVEL 12	ROOM BAHAMAS 3 LEVEL 12	ROOM BUSINESS CENTRE 4 LEVEL 15	SOCIAL EVENTS
07:00 - 09:00						
09:00 - 10:30	APNIC Plenary: Anatomy of CGN	APCERT (I)	ISOC NetOps Workshop (I)			
10:30 - 11:00	MORNING TEA					
11:00 - 12:30	APNIC Global Reports	APCERT (II)	ISOC NetOps Workshop (II)			
12:30 - 14:00	LUNCH - LAGOON 1, LEVEL 15					
14:00 - 15:30	From Governance to Cooperation: Decoding the Puzzle	APCERT (III)				
15:30 - 16:00	AFTERNOON TEA					
16:00 - 17:30	APIv6TF and IPv6 Readiness Measurement BoF	APCERT (IV)	Response RateLimiting with BIND Tutorial			
17:30 - 19:00		Network Abuse BoF	Network Function Virtualization BoF			
19:00 - 19:30						<b>Women in ICT</b> Business Centre 4, Level 15 18:00-19:30

### KEY

	APRICOT
	APNIC
	SOCIAL EVENT
	OTHER EVENTS
	CLOSED EVENTS





# Conference Timetable



## THURSDAY FEB 27, 2014

TIME	ROOM GRAND CAYMANS LEVEL 10	ROOM BAHAMAS 1 LEVEL 12	ROOM BAHAMAS 2 & 3 LEVEL 12	ROOM BAHAMAS 3 LEVEL 12	ROOM BUSINESS CENTRE 4 LEVEL 15	SOCIAL
07:00 - 09:00						
09:00 - 10:30		Routing	Designing and Deploying SP WiFi 1			
10:30 - 11:00	MORNING TEA					
11:00 - 12:30	Policy SIG 2	Conference: DNS Session	Designing and Deploying SP WiFi 2			
12:30 - 14:00	LUNCH - LAGOON 1, LEVEL 15					
14:00 - 15:30	Policy SIG 3	Lightning Talks	Know your backbone: DWDM			
15:30 - 16:00	AFTERNOON TEA					
16:00 - 17:30	Closing Plenary					
17:30 - 19:00						
19:00 - 21:00						<b>APRICOT Closing Social</b> Mantra Restaurant & Bar, Sunway Pyramid Tower Hotel

### KEY

	APRICOT
	APNIC
	SOCIAL EVENT
	OTHER EVENTS
	CLOSED EVENTS






# Conference Timetable



## FRIDAY FEB 28, 2014

TIME	ROOM GRAND CAYMANS LEVEL 10	ROOM BAHAMAS 1 LEVEL 12	ROOM BAHAMAS 2 LEVEL 12	ROOM BAHAMAS 3 LEVEL 12	ROOM BUSINESS CENTRE 4 LEVEL 15	SOCIALS
07:00 - 09:00						
09:00 - 10:30	APNIC AMM 1					
10:30 - 11:00	MORNING TEA					
11:00 - 12:30	APNIC AMM 2					
12:30 - 14:00	LUNCH - FUZION, LEVEL 1					
14:00 - 15:30	APNIC AMM 3					
15:30 - 16:00	AFTERNOON TEA					
16:00 - 17:30						
17:30 - 19:00						
19:00 - 21:00						AMM Closing dinner

### KEY

	APRICOT
	APNIC
	SOCIAL EVENT
	OTHER EVENTS
	CLOSED EVENTS

# List of Speakers

## KEYNOTE SPEAKERS

**Kanchana Kanchanasut**  
AIT

**Nii Quaynor**  
NITA

**Pindar Wong**  
VeriFI

## SPEAKERS

**Adam Gosling**  
APNIC

**Adib M. Monzer Habbal**

**Adiel Akplogan**  
AFRINIC

**Aftab A. Siddiqui**  
Cybernet

**Ahmad Alkazimy**  
ID-CERT

**Andrei Robachevsky**  
ISOC

**Alastair Johnson**  
Alcatel-Lucent

**Andy Davidson**  
Allegro

**Andy Linton**  
NSRC

**Anna Mulingbayan**  
APNIC

**Arnold Nipper**

**Ashlyn Rodgers**  
Telecom Fiji

**Axel Pawlik**  
RIPE NCC

**Bani Lara**  
DOST

**Bijal Sanghani**

**Cameron Byrne**  
T-Mobile US

**Charles Conte**  
Microsoft

**Che-Hoo Cheng**  
Chinese University of Hong Kong

**Clarence Filsfils**  
Cisco

**Cody Williams**

**Craig Ng**  
APNIC

**Cristel Pelsser**  
IJJ

**David Conrad**

**Dean Pemberton**  
InternetNZ

**Dr Govind**  
NIXI

**Eddie Parra**  
Juniper Networks

**Eddy Winstead**  
Internet Systems Consortium (ISC)

**Einar Bohlin**  
ARIN

**Fakrul Alam**  
bdHUB

**Frank Salanitri**  
APNIC

**Gaurab Raj Upadhaya**  
Limelight Networks

**Geoff Huston**  
APNIC

**George Kuo**  
APNIC

**Greg Hankins**  
Alcatel-Lucent

**Gunter Van de Velde**  
Cisco Systems

**Henk Steenman**

**Hervey Allen**  
NSRC

**Hideo Ishii** PACNET  
Global Singapore

**Hiroki Kawabata**  
JPNIC

**Hongsoon Jung**  
KrCERT/CC

**Ingrid Wijte**  
RIPE NCC

**James Spenceley**  
APNIC EC

**Jan Zorz**  
Internet Society (ISOC)

**Jane Coffin**  
Internet Society (ISOC)

**John Crain**  
ICANN

**Joonhyung Lim**  
KISA

**Juan Alejo Peirano**  
LACNIC

**Kasu Venkata Reddy**  
Cisco

**Katsuyasu Toyama**

**Khoudia Gueye**  
NSRC

**Kieren McCarthy**  
.NXT

**Krystal Waine**  
InternetNZ

**Kuo Wei Wu**  
NII-EPA

**Kurt Erik Kindqvist**  
Netnod

**Leo Vegoda**  
ICANN

**Maemura Akinori**  
APNIC EC

**Marco Brandstaetter**  
DE-CIX

**Mark Tinka**  
SEACOM

**Masatak Mawatari**  
JPIX

**Md. Hayder Ali**  
Fiber@Home

**Michael Biber**  
APIPv6TF

**Michael Fincham**  
Unleash

**Miwa Fuji**  
APIPv6TF

**Naveen Tandon**  
At&T

**Ng Seo Boon**  
Cisco

**Patrick Okui**  
NSRC

**Paul Ooi Cong Jen**

**Paul Wilson**  
APNIC

**Phil Regnauld**  
NSRC

**Philip Smith**  
APIA

**Pierre Baume**  
Netnod

**Rajesh Chharia**  
ISPAT

**Rajesh Singh**  
ISOC

**Ralf Weber**  
Nominum

**Randy Bush**  
IJJ

**Raphael Ho**  
Equinix

**Reza Shahab**  
Alcatel-Lucent

**Rinalia Abdul Rahim**  
Compass Rose

**Ritz Campbell**

**Roland Dobbins**

**Santanu Dasgupta**  
Cisco Systems

**Scott Brown**  
CERT Australia

**Sheau Ching Chong**

**Sheng-Wei Kuo**  
TWNIC

**Sheryl Hermoso**  
APNIC

**Shian-Shyong Tseng**  
TWNIC

**Shin Miyakawa**  
NTT

**Shyam Nair**  
Sify Technologies

**Simon Sohel Baroi**  
Fiber@Home

**Srinath Beldona**  
Yashasvi

**Srinivas Chendi**  
APNIC

**Sunny Yeung**  
Telstra

**Surachet Sripolkrang**  
TOT

**Takahiro Ishikawa**  
JPCERT/CC

**Teddy Mantoro**

**Therdtoon Theerasasana**  
Cisco

**Tomas Marsalek**

**Tomohiro Fujisaki**  
NTT

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Internet Multifeed

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**Viraphan Samadi**  
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 **APRICOT 2014**

# What next?

**APRICOT 2015**  
24 Feb – 6 March 2015

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 **APRICOT 2014**

