

# Network Operations Groups

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MENOG 4

5-9 April 2009



# Internet Operations Groups





# Internet Operations Groups

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- Where network engineers and operators meet their colleagues
  - Peering & Business relationships
  - Industry relationship
  - Technology discussions
  - Operational best practices
  - Compare experiences (supplier, operational,...)
  - Purchasing decisions influenced
  - Routing software feature requests worked out
  - Jobs fair
  - **Keeping the Internet Working**

The title "NANOG" is written in a large, blue, sans-serif font. To the left of the text is a graphic consisting of a vertical black line and several overlapping colored squares (yellow, red, blue) with a gradient effect. A horizontal grey line runs across the slide below the title.

# NANOG

- North American Network Operations Group
  - Evolved from NSFNET 'Regional Techs' meeting in 1994
  - Attracts participants from Europe and Asia too
- Three meetings a year
  - October meeting co-located with ARIN
  - NANOG 46 – June 2009, Philadelphia
  - NANOG 47 – October 2009, Detroit
- Around 500 attendees
  - Depends on location
  - Depends on early publication of programme

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# NANOG (2)

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- Programme
  - (two days of plenary, one day of tutorial)
  - Plenary sessions
  - Panel discussions
  - BoFs (Peering & Security are long running events)
  - Tutorials
- Website:
  - [www.nanog.org](http://www.nanog.org)



# APRICOT

- Asia and Pacific Operations Conference
  - Established in 1996
  - Co-located with one APNIC meeting
- Held annually on the last week of February
- Typical attendance around 600
- Moves around AP region
  - 2010 will be in Kuala Lumpur
  - 2011 will be in Hong Kong



# APRICOT (2)

- Programme
  - 5 days of workshops
    - 5 parallel workshops
  - 4 days of tutorials and conference
    - Plenary sessions
    - Parallel streams (maximum of 4)
    - BoFs
    - AP organisations hold side meetings
  - 1 day APNIC Member Meeting
- Website:
  - [www.apricot.net](http://www.apricot.net)



# SANOG

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- South Asia Ops Group
  - Established in 2003
- Bangladesh to Afghanistan
- Two events per year (January and July)
- Typical attendance now 250
- Moves around South Asia
  - SANOG 14 in August 2009 in Chennai
  - SANOG 15 in January 2010 in Colombo
- Yet to visit Maldives and Afghanistan





# SANOG (2)

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- Programme
  - 5 days of workshops
    - 3 parallel workshops
  - 2 days of tutorials
    - 3 parallel tutorials
  - 1 to 2 days of conference
    - Includes APNIC Policy Showcase
- Website:
  - [www.sanog.org](http://www.sanog.org)



# AfNOG

- African Ops Conference
  - Established in 2000
  - Still centred around Workshops, based on the now defunct INET Workshops organised by ISOC
- Meets once per year in April/May
- Typical attendance around 120
- Moves around Africa
  - 2008 was in Rabat
  - 2009 will be in Cairo



# AfNOG (2)

- Programme
  - 5 days of workshops
    - 4 parallel workshops including System Administration, Scalable Services and Scalable Infrastructure
  - 2 days of tutorials
    - 3 parallel tutorials, usually more detailed content than the workshops
  - 1 day of conference
  - AfriNIC meeting follows
- Website:
  - [www.afnog.org](http://www.afnog.org)



- South Pacific Ops Group
- Launched after APNIC 18 in 2004
- Up to 2008, met annually
- Now meets twice per year in June and November:
  - Vanuatu in 2008: 40 participants
  - Tahiti and (maybe) Fiji this year
- Coordination & Programme Committee
- Financial support from ISOC, NSRC, PITA & local host



## PacNOG (2)

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- Programme
  - 1 day of conference including country reports
  - 5 days of workshops
    - Usually a mixture of routing, service infrastructure, services, and security
- Website:
  - [www.pacnog.org](http://www.pacnog.org)

The logo graphic consists of a vertical black line intersecting a horizontal black line. To the left of the intersection, there are three overlapping squares: a yellow one at the top, a red one to the left, and a blue one at the bottom.

# MENOG

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- Middle East Network Operators Group
  - Launched in April 2007
  - (Following RIPE NCC regional meeting in Bahrain in November 2006)
- Meets twice per year (April and Oct/Nov)
  - MENOG 3 was in Kuwait in April 2008
  - Active presence at RIPE 57 in Dubai
  - MENOG 4 in Bahrain in April 2009
  - MENOG 5 possibly to be in Lebanon



## MENOG (2)

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- Programme
  - 2 days plenary conference
  - 1 day tutorials
- Still very early days, with future expansion being planned:
  - Decision makers meeting
  - Hands-on workshops
- Website:
  - [www.menog.net](http://www.menog.net)

A decorative graphic on the left side of the slide, featuring a vertical black line that intersects with a horizontal black line. To the left of the vertical line, there are three overlapping squares: a yellow one at the top, a red one in the middle, and a blue one at the bottom. The text "RIPE Meetings" is written in a large, blue, sans-serif font to the right of the vertical line.

# RIPE Meetings

- There is no European NOG
- RIPE is closest Europe gets to an Ops Forum
  - Organised by RIPE NCC
- Two per year
  - May & October
  - Next RIPE meeting in Amsterdam in May
  - All conference, partly plenary, partly RIPE WG meetings
  - Now includes RIPE NCC member meeting (closed to RIPE NCC members only)
- Around 300 participants, depending on location





# Country NOGs

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- Many country NOGs
- Two deserve special mention:
  - NZNOG
  - JANOG



# NZNOG

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- New Zealand Operators Group
- Meets once per year
- Programme
  - 1 day of Tutorials
  - 2 days of Conference
- Around 120 participants (!)
- Fairly informal structure, with “guides”
- Website:
  - [www.nznog.org](http://www.nznog.org)



# JANOG

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- Japan Network Operators Group
- Running since 1997
- Meets twice per year
- In Japanese
- 300-400 participants
- 2 days Conference
  - Wide range of topics
- Website:
  - [www.janog.gr.jp](http://www.janog.gr.jp)



# More information

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- Other NOGs:
  - [www.bugest.net/nogs.html](http://www.bugest.net/nogs.html)
- Meeting planning:
  - “Network Education and Training Calendar of Events” maintained by the NSRC
  - [ws.edu.isoc.org/calendar](http://ws.edu.isoc.org/calendar)
  - Intention is to avoid conflicts and overlaps



# New NOGs

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- NOG creation is a recent phenomenon
  - Local Language
  - Local Needs
  - Local Culture
- SANOG and NZNOG are common models
  - Avoid temptation to introduce bureaucracy
- Potential new Regionals:
  - Central Asia
  - Caribbean
  - Latin America

# Essential Elements of a NOG



# Organisation

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- **Independent**

- Not run by vendors, the incumbent telco, Government, regulator, or any one ISP
- Cross industry support from:
  - Commercial Service Providers
  - Research & Academic Networks
  - Software & Hardware Vendors
  - Regional Internet Registries, ISOC, NSRC, etc
  - Independent industry participants



# Funding Models

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- **Non-profit**
- Meeting Costs:
  - Sponsorship by vendors & service providers
  - Contributions by local host
  - Contributions in-kind (Internet connectivity, PCs, organisation)
- Registration Fees:
  - Some NOGs don't charge – when they have sufficient sponsorship support
  - Bigger NOGs do charge, as costs of holding a big meeting can be prohibitive





# Funding Models

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- **Low budget**
- Budgeting is frugal
  - Avoid fancy venues, expensive professional conference organisers, glitzy marketing, wasting precious resources
  - Good environment where ISPs can meet, talk, discuss, socialise, educate, listen and learn
- Example:
  - APRICOT 2009 was a 630 attendee event over 10 days with a budget of US\$320k



# Committees

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- **Minimal Bureaucracy**
- Organising Committee
  - Cross industry representation, either elected, nominated, or volunteers
  - Activities: Plan & organise each meeting, and future meetings
- Programme Committee
  - Cross industry representation, nominated or volunteers
  - Activities: Solicit presentations, review submissions



# Participation

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- **Open to ALL**
  - Mailing lists are first “point of entry”
- NOGs have no members, no membership fee & no barrier to entry
  - Anyone who is interested can participate
  - Conferences allow greater interaction and contact between participants

MENOG

Middle East Network Operators  
Group



# How did we begin?

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- RIPE NCC started holding regional meetings in Middle East (and in Russia)
  - Following many requests from members
  - First meeting was in Dubai, December 2003
  - Second meeting was in Qatar, January 2006
  - Third meeting was in Bahrain, November 2006
  - Each time there were conversations about establishing a NOG for the region



# How did we begin?

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- 7th June 2006 was first public proposal on ncc-regional-me mailing list
  - Malik Awin suggested establishing a BoF to discuss setting up MENOG
- 15th November 2006 during the closing of the Bahrain RIPE NCC Regional Meeting
  - Fahad AlShirawi proposed to establish MENOG, with 2Connect being the host of the first meeting during 2007



# How did we begin?

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- Small coordination committee formed
  - Fahad AlShirawi
    - Motivator!
  - Paul Rendek & Sandra Gijzen
    - RIPE NCC
  - Gaurab Raj Upadhaya
    - SANOG
  - Philip Smith
    - APRICOT



# How did we begin?

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- MENOG 1 held in Bahrain
  - April 2007
  - Hosted by 2Connect
  - Good programme
  - Participants came!
  - MENOG mailing list established in July 2007
- Proposal from Qtel to host later on in 2007
  - Coordination Committee agreed that MENOG should take place twice a year
  - Call for future hosts published
  - Programme Committee established





# Subsequent Events

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- MENOG 2 held in Qatar
  - November 2007
  - Hosted by QTel
- MENOG 3 held in Kuwait
  - April 2008
  - Hosted by Wataniya Telecom
- RIPE 57 in Dubai
  - October 2008
  - Not a MENOG, but we had a presence there



# Developments

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- After Kuwait MENOG meeting:
  - Coordination Committee expanded
    - Sultan AlShamsi (Etisalat)
    - Osama I Al-Dosary (Cisco)
  - Programme Committee expanded
    - Kais Al-Essa (SaharaNet)



# Today!

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- MENOG 4
- Enhancements:
  - Experiment with offering workshops
    - 3 days only
    - (most workshops are typically 5 days long)
  - 0.5 days of tutorials
  - 1.5 days of plenary conference
  - Programme committee more active
    - Reviewed presentation submissions



# The Future

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- MENOG 5
  - Offer to have it in Lebanon in October/November
  - Similar format to MENOG 4
- MENOG in 2010
  - We are looking for volunteers to host the event (April and November)
  - We are looking for volunteers for the Programme Committee
    - Around 10 hours time needed to review presentation proposals
    - Ability to seek out good operation presentations



# The Future

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- MENOG is still growing
  - The event needs to be held in each country in the region
  - Widen the training efforts
    - More workshops, more tutorials, more special interest conference sessions
  - More volunteers to help with Programme development
  - More volunteers to help with organisation

Questions?