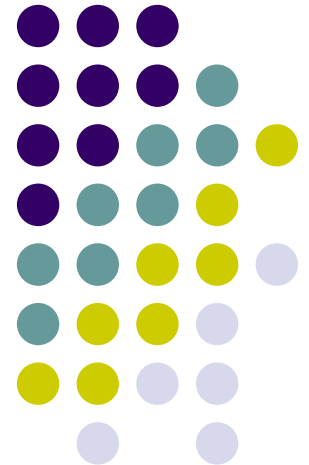


Peering Survey 2008 Results

Greg Hankins, Force10
Ren Provo, Comcast
Tom Scholl, AT&T





Results About the Results

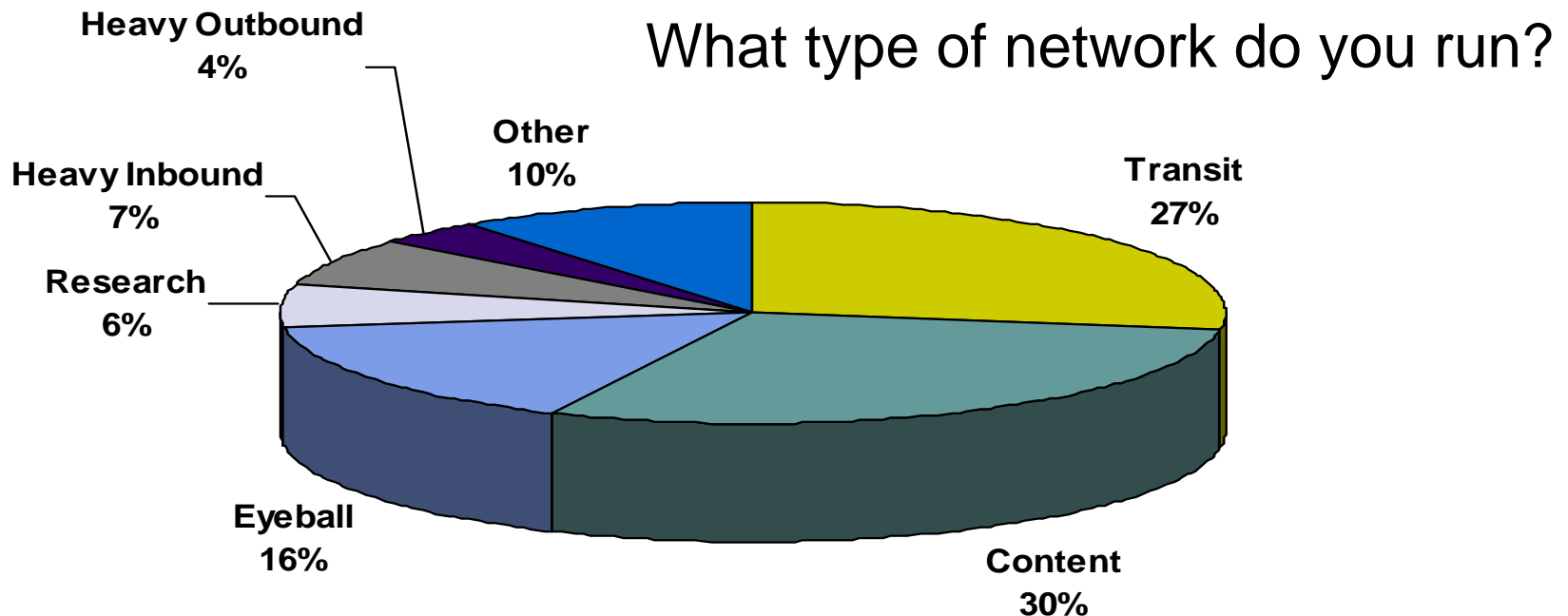
- Huge number of responses
 - 193 started
 - 169 made it to the second page
 - 153 finished all 24 questions
- 74 respondents provided their ASN
 - Optional
 - Anonymous to make it simple
- Thanks to everyone who participated in, and promoted the survey



What were the topics again, and who answered??

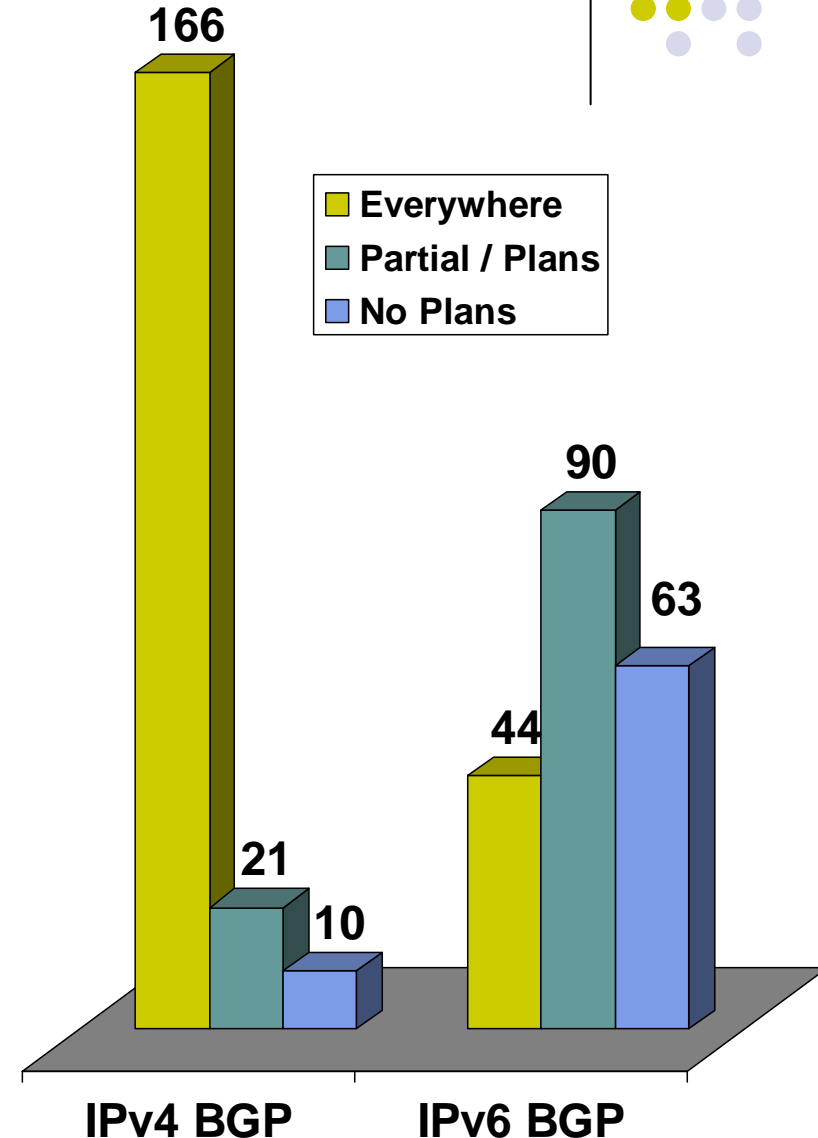


- General Peering Questions
- BGP Peering Specifics
- Other Peering Practices



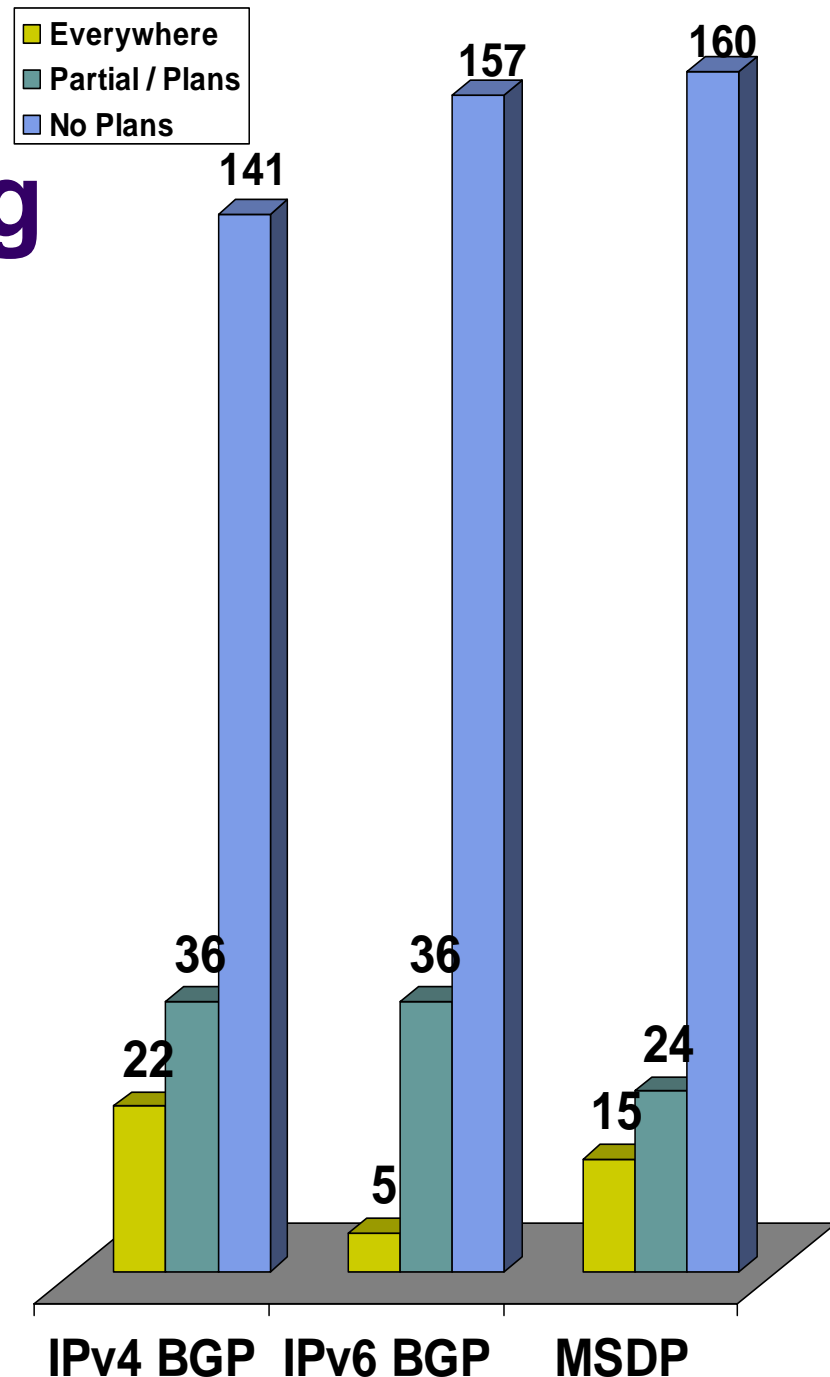
IP Unicast Peering

- IPv4
 - Yes this was a serious question 😊
- Trend to deploy IPv6 this year
 - Comments
 - Insufficient demand
 - Application doesn't support IPv6
 - Many are still investigating/testing
 - Recent SIG-IX discussion, most people prefer dual stack
 - Interest from IXs around the world to support IPv6 peering



IP Multicast Peering

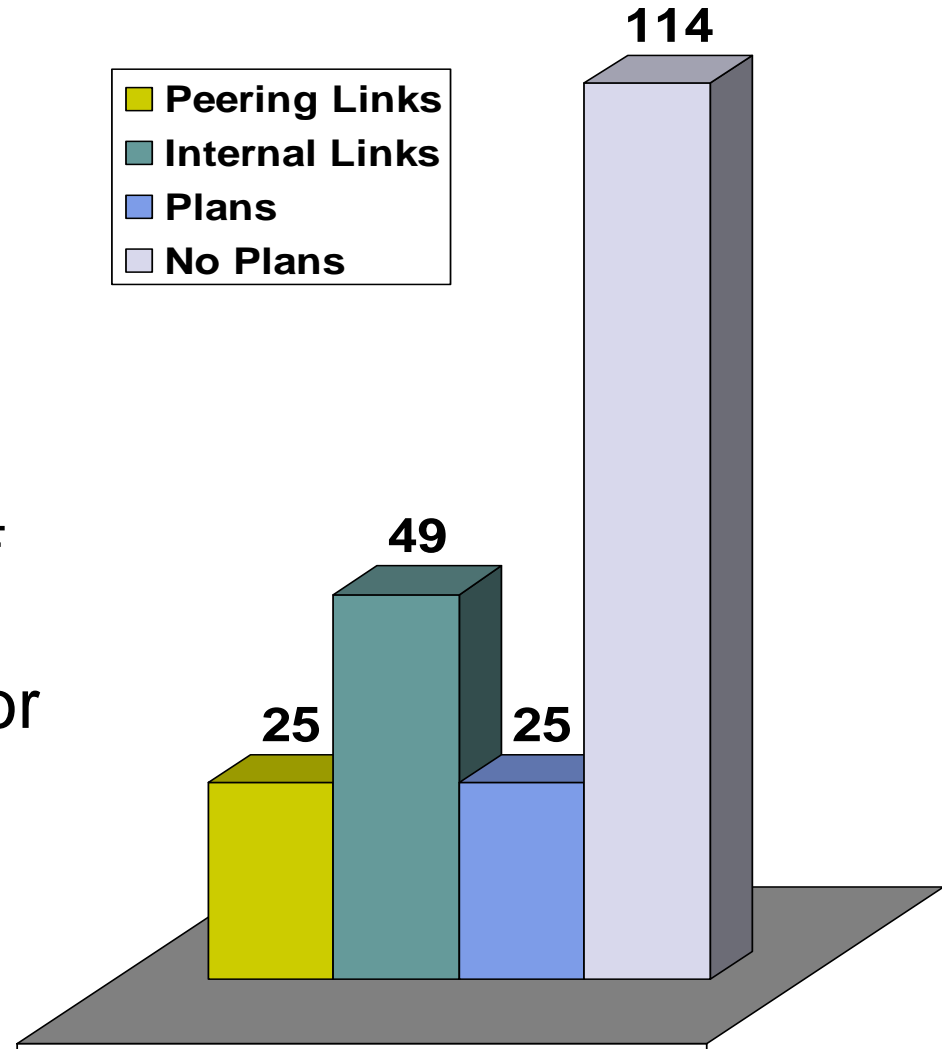
- Comments
 - Insufficient demand
 - Application doesn't support multicast
 - Many are still investigating/testing
- Varying support at IXs for multicast peering
 - Many offer a separate VLAN



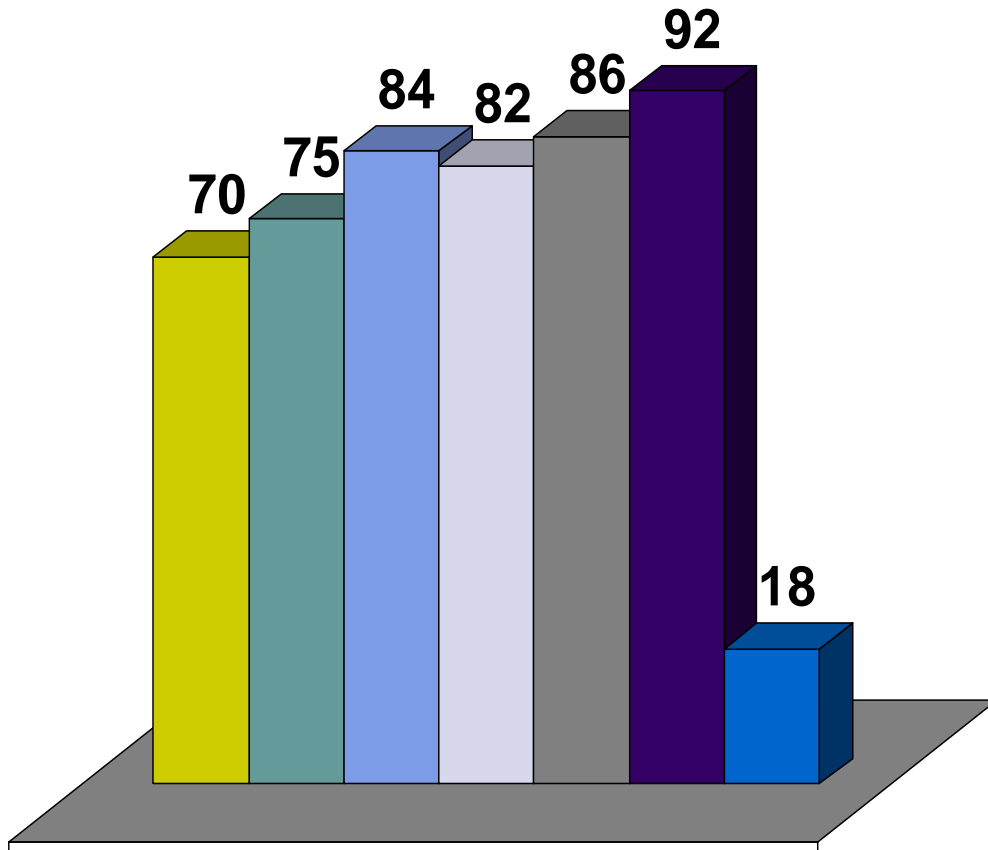
BFD



- Concerns about
 - Stability
 - Interoperability
- Interest and discussion about BFD recently
 - IXs thinking about BFD
 - NANOG42 IX Operators BoF
- People don't know what BFD does, opportunity for education

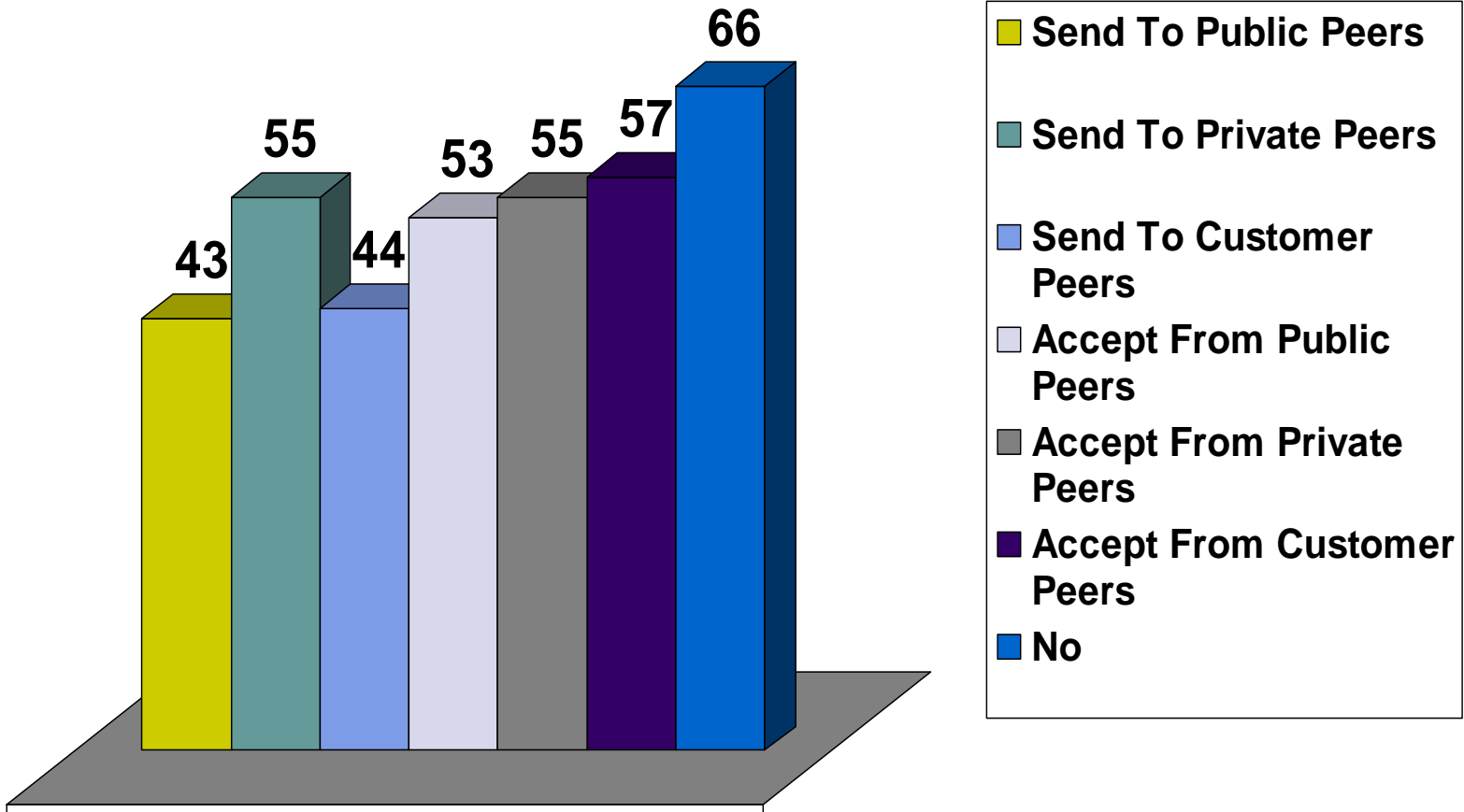


BGP Communities



- Send To Public Peers
- Send To Private Peers
- Send To Customer Peers
- Accept From Public Peers
- Accept From Private Peers
- Accept From Customer Peers
- No

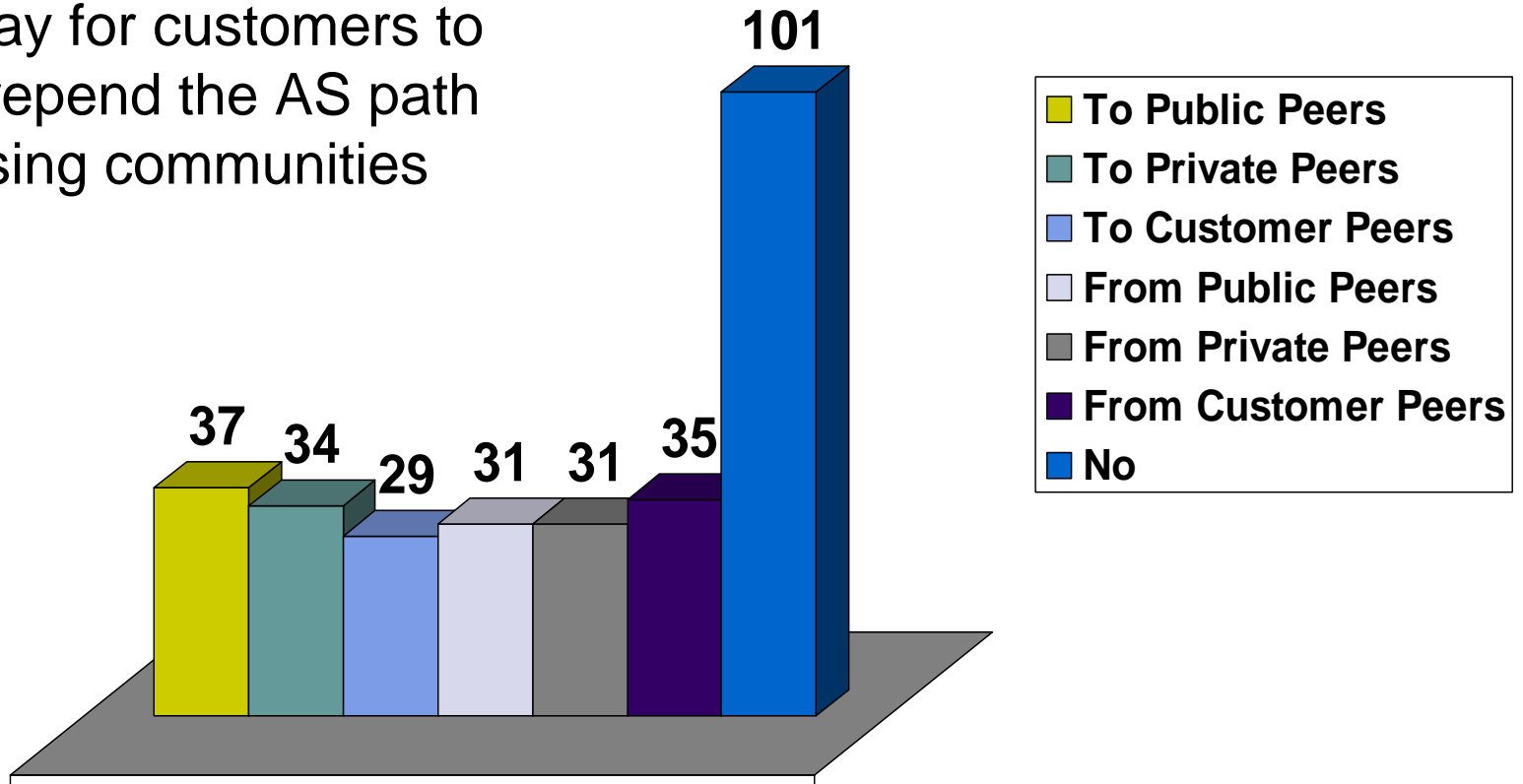
BGP MEDs



Changing BGP Path Attributes



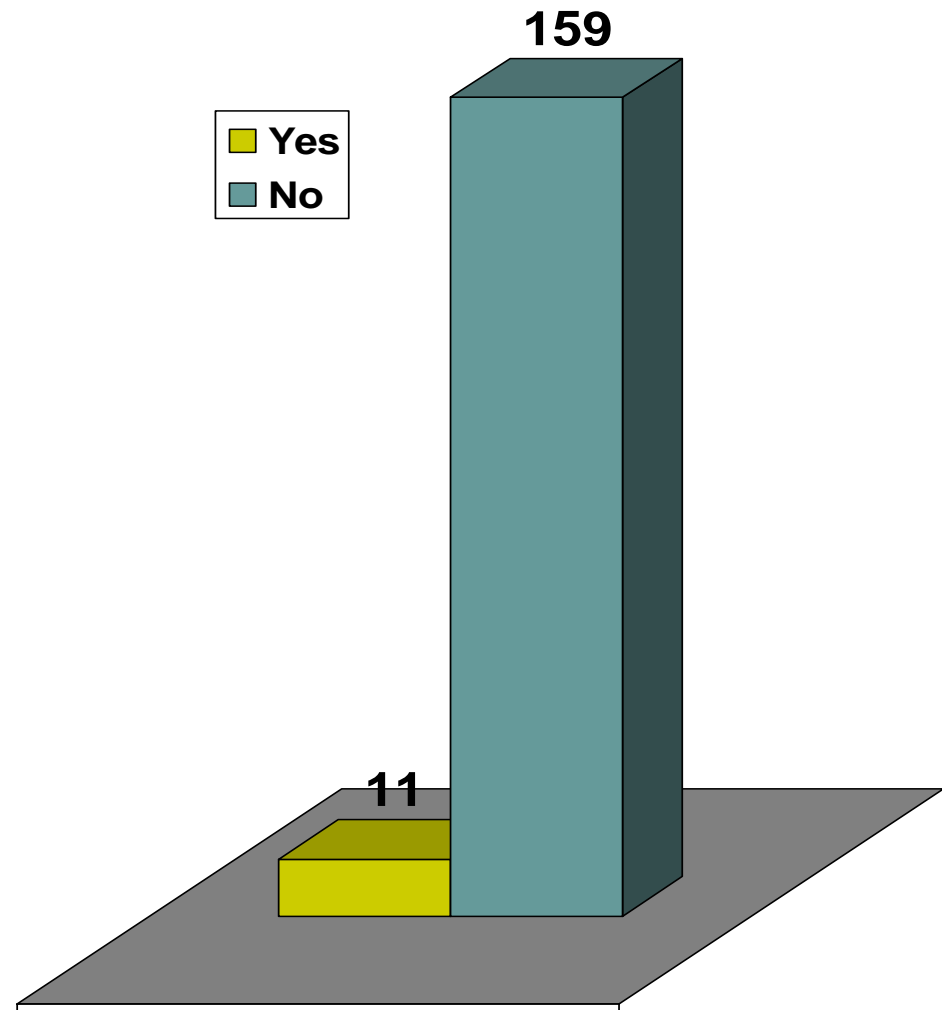
- Comments
 - Several people provide a way for customers to prepend the AS path using communities



Do you change the BGP next hop to a network you do not peer with?



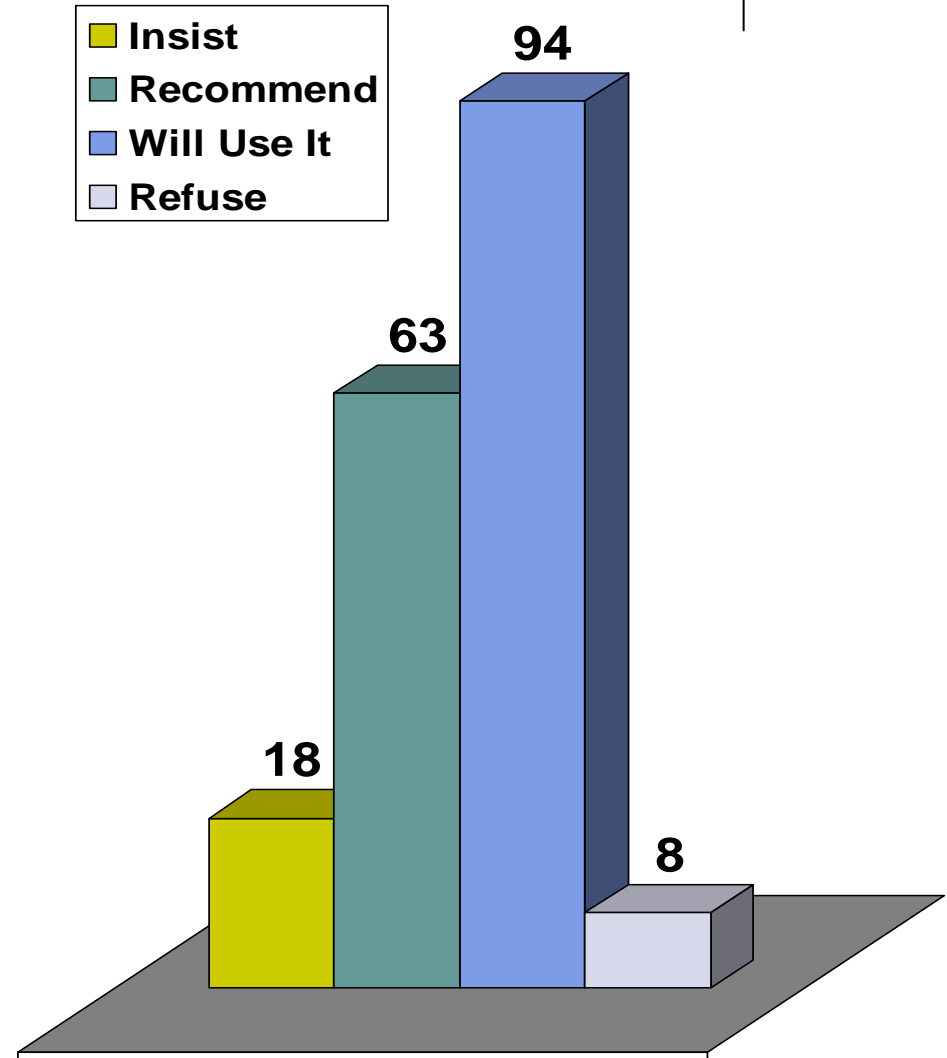
- Interesting discussion at NANOG42 Peering BoF XVII
- Hard to detect
- Some vendors are now providing a feature to mitigate





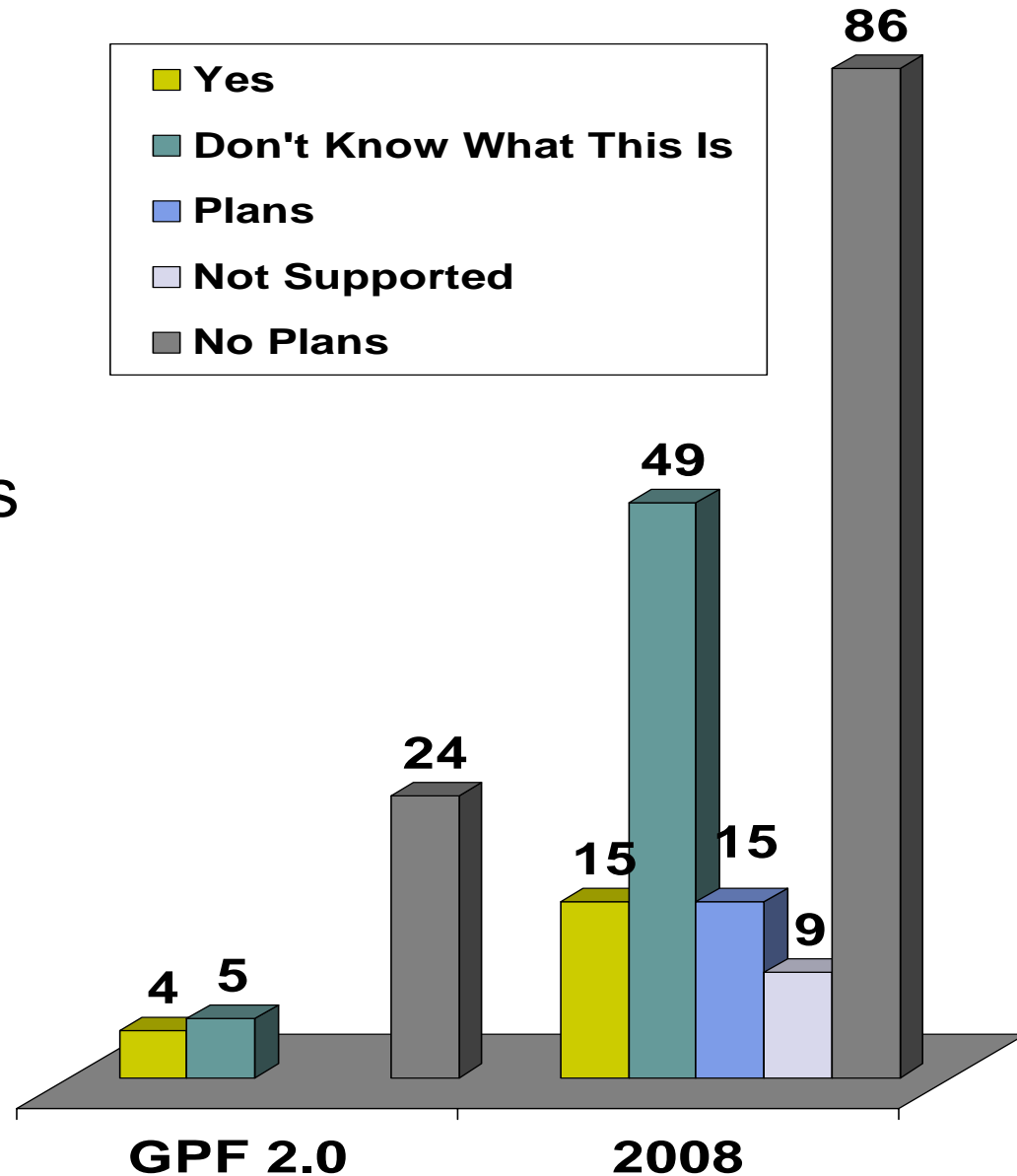
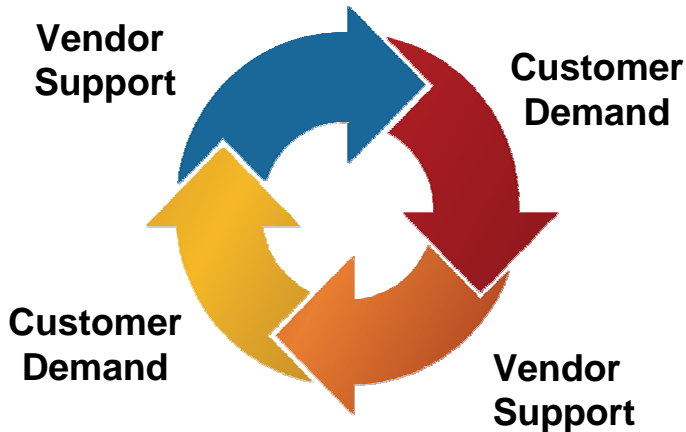
BGP MD5 Signatures

- People generally hate it because it causes more problems than it solves
 - Interoperability
 - Feature support
 - Lost passwords
- Comments
 - You need to add a "sigh, let's do it if you really insist" question...
- Need something that examines pros/cons and a BCP for MD5



BGP GTSM

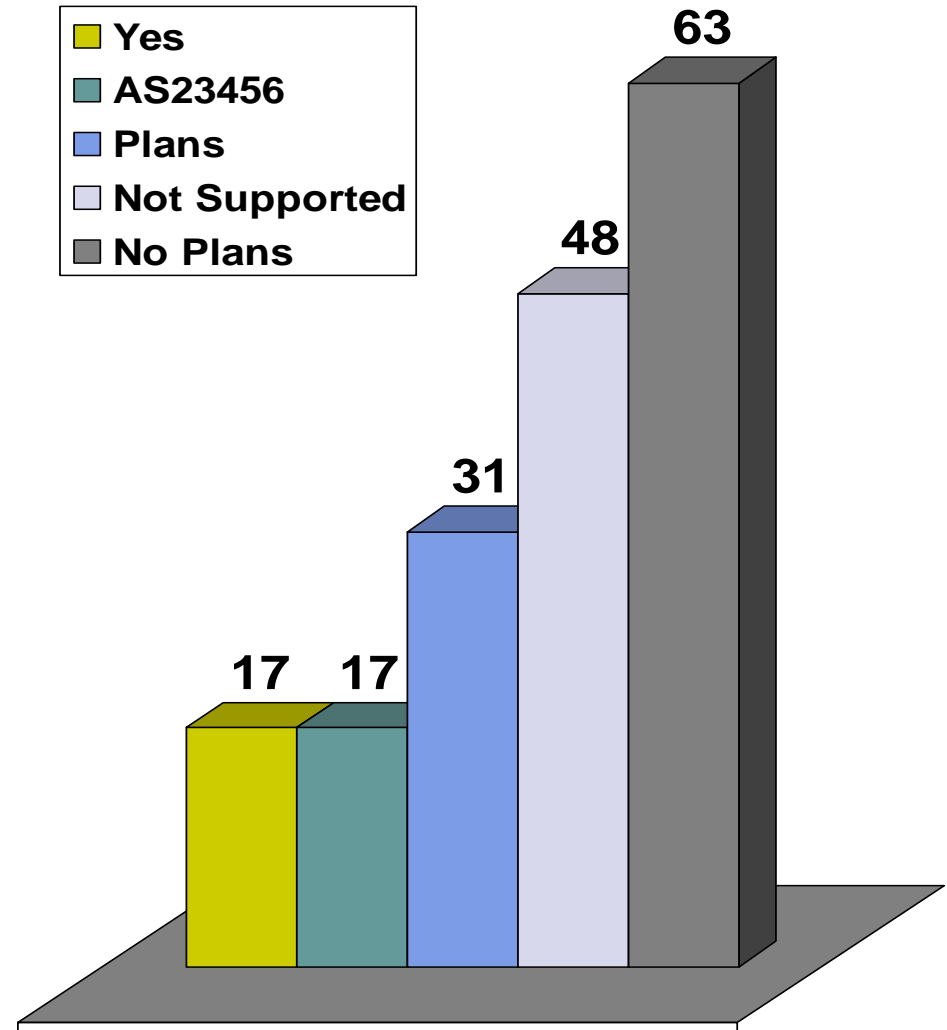
- Coarse correlation to last year's survey
- Need to educate the community on benefits
- Comments
 - Many would like to use this feature





BGP Four Byte ASNs

- Most people are waiting on vendor support and customer demand
 - Cisco, Force10, Juniper will support it (widely) this year
 - Quagga, OpenBGPd support it
- Comments
 - One customer using it

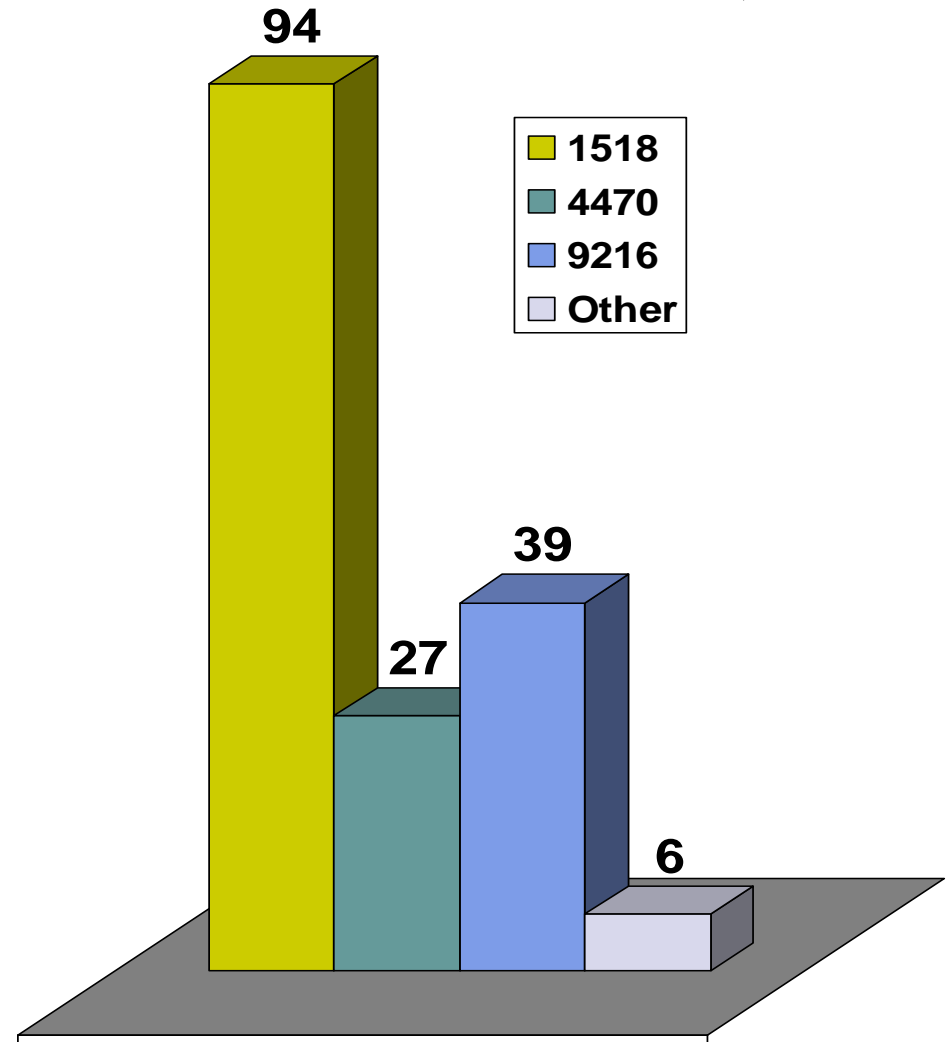


MTU



- Comments
 - Many use a larger MTU on PNIs
 - Many would like to use larger MTU on public exchanges
 - Problem to use a larger MTU on public peering fabrics because everyone has to change
- “Supporting Jumbo Packets on the Internet”

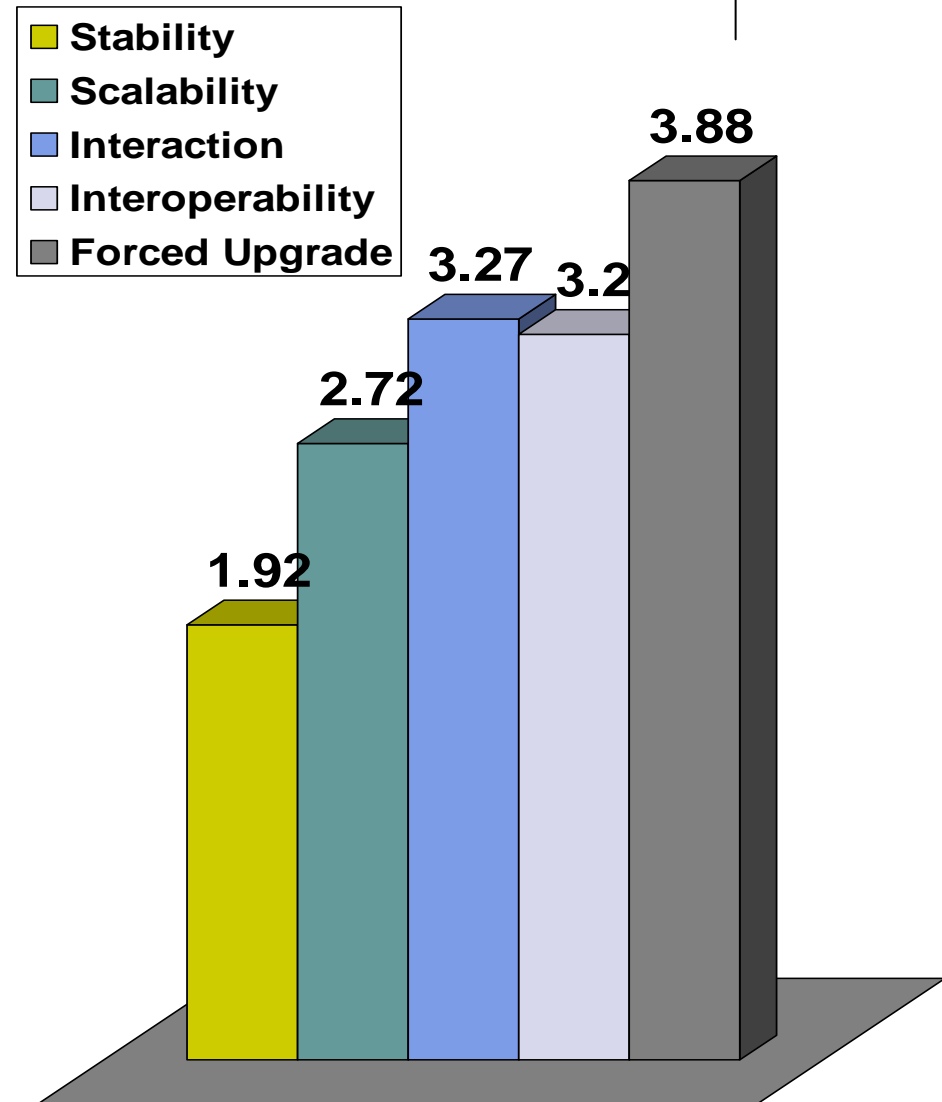
<http://www.nanog.org/mtg-0802/scholl.html>



Biggest Concern About New Deploying Features



- Ranking of
1 – most important to
5 – least important
- Primary concern about new features working (at all) and being stable
 - Correlates with discussion at EPF 2.0
 - Possible answer to why people aren't using the latest and greatest features



Things We Should Have Asked

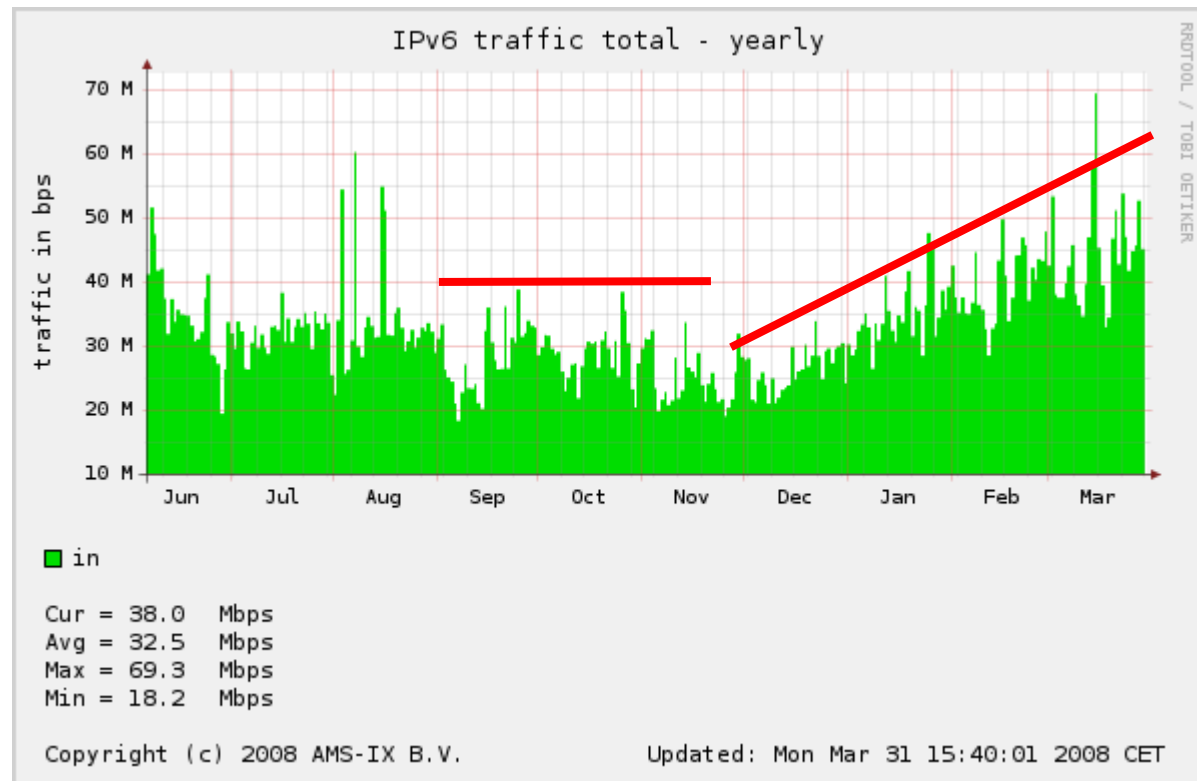


- Geographic location question to see trends by regions (Asia, Europe, North America, ...)



Conclusions

- We're slowly getting our IPv6 peering on
 - 70 Mbps peak at AMS-IX recently
 - Google IPv6 initiative



Conclusions



- Not much going on with multicast peering
- Interest in BFD, GTSM, four byte ASNs, and larger MTUs
- There is a need to educate the community on features and best practices
 - BFD, route refresh, graceful restart, MD5, GTSM, flow spec, ORF
 - Tom Scholl is working on a presentation at NANOG43 about peering best practices
 - Discussions started with Philip Smith on a workshop

Conclusions



- Complete survey results are here:
<http://www.twoguys.org/~gregh/peering-survey-2008/peering-survey-2008-results.pdf>

Questions?

- Answers?
- Comments?
- Observations?

