ARBOR®

NETWORKS

The Security Division of NETSCOUT

1 December 2015
Michele Banfo
Sales Manager Mediterranean Region
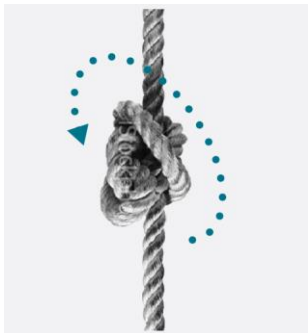
ARBOR NETWORKS OVERVIEW

Arbor's proud history of productizing innovation in distributed networks.

- Honored as a top 10 global innovations
- Key patents in networking & security.

Arbor sees more global traffic and threats than anyone else on the planet.

- Analyzing over 120Tbps of data
- Monitoring over 500 malware families

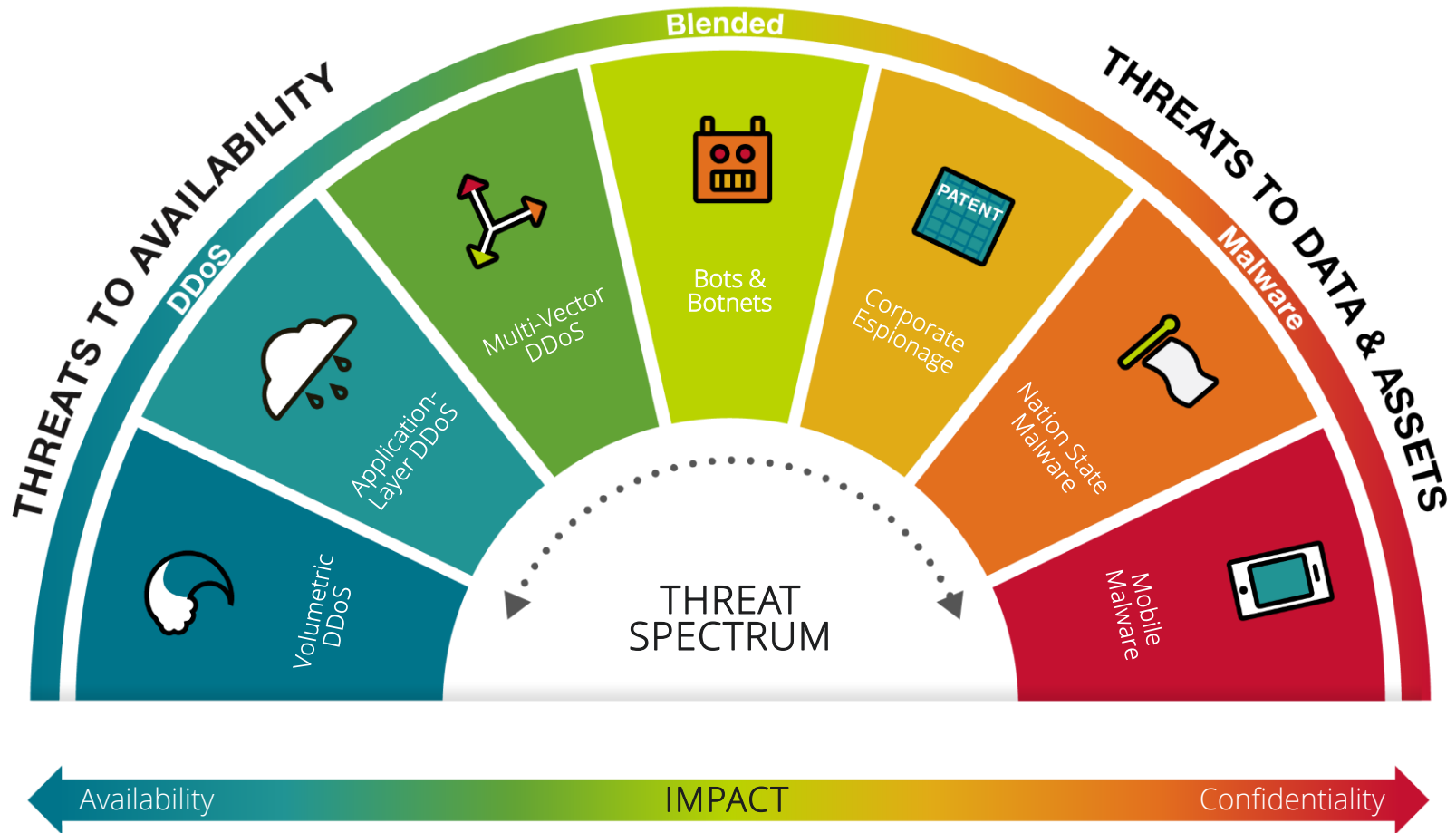**Arbor is the most trusted** and widely deployed solution for DDoS & Botnets.

- Over 90% of the world's Tier 1 ISPs
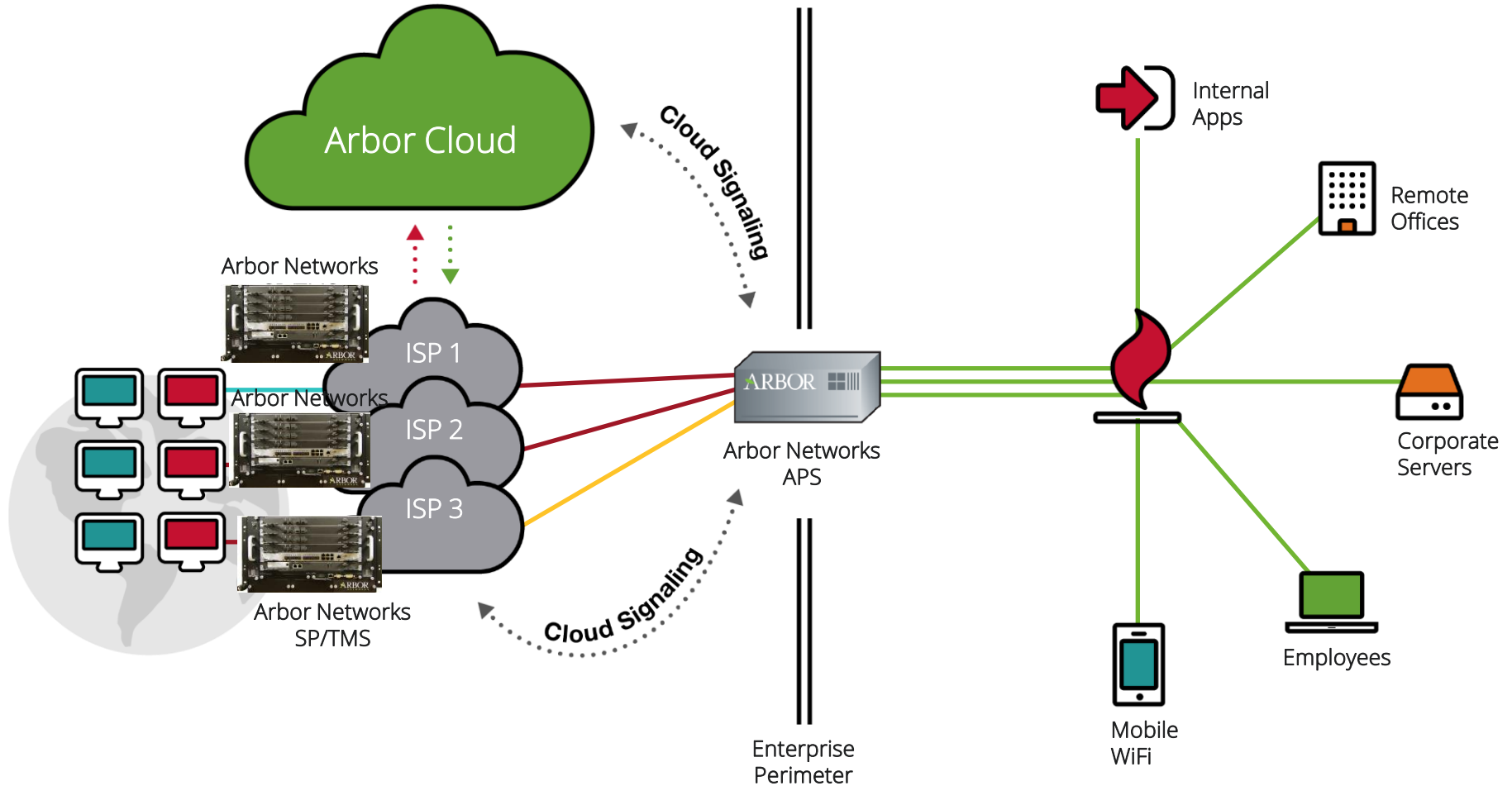- 9 of the top 10 largest business networks

Only Arbor has a fully integrated solution to quickly detect & stop advanced threats.

- Integrated to detect & stop threats anywhere
- See beyond the network through ATLAS

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THE NEW BREED OF ADVANCED THREATS

ARBOR'S COMPLETE DDOS SOLUTION

Arbor Cloud

Arbor Networks

Arbor Networks

Arbor Networks
SP/TMS

ISP 1

ISP 2

ISP 3

Cloud Signaling

Cloud Signaling

Arbor Networks
APS

Enterprise
Perimeter

Internal
Apps

Remote
Offices

Corporate
Servers

Employees

Mobile
WiFi

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Arbor DDoS Mitigation Platforms

Mitigation
Capacity

160G

100G

40G

10G

1G

100M

High Density
TMS & APS 2U
(20G – 160G- 320G)

TMS 5000

APS
2800

TMS
2800

TMS 4000

APS
2000

TMS
2300

vAPS/vTMS

$50K $100K $200K $300K $400K $500K

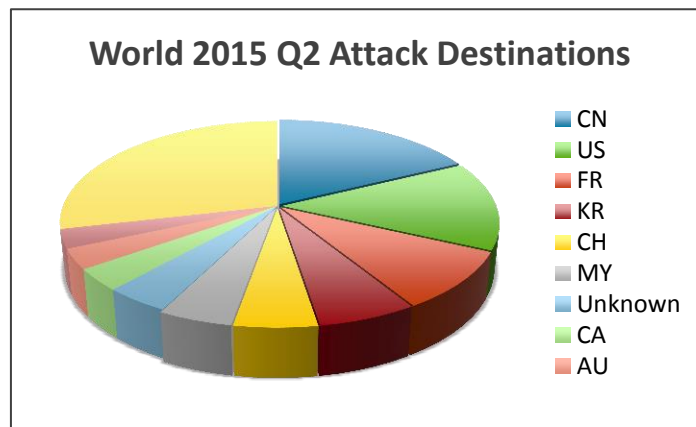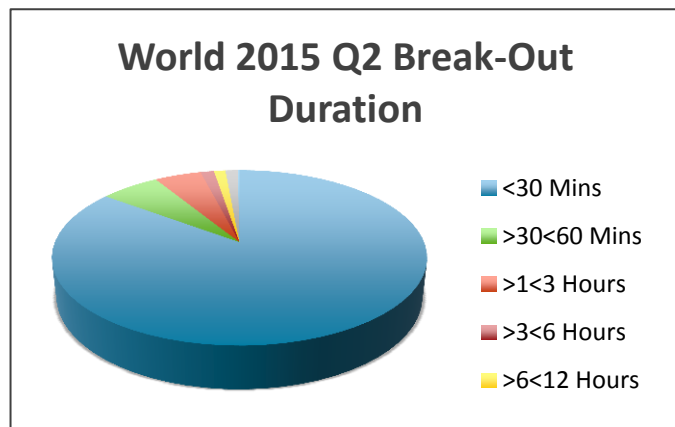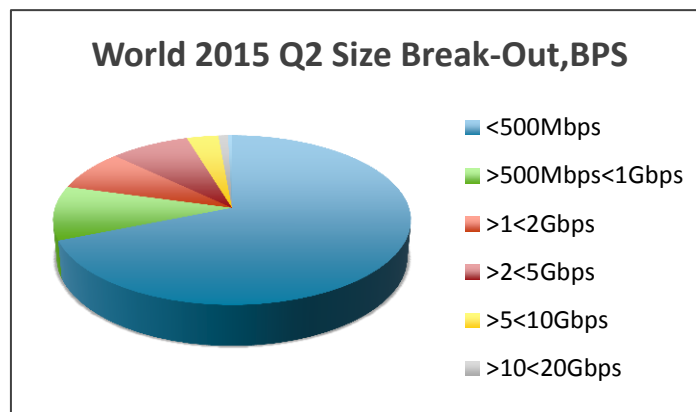**List Price**

ATTACKS ANALYSIS

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THE ARBOR ATLAS INITIATIVE

- 300+ ISPs sharing real-time data: ATLAS Internet Trends
  - Anonymized hourly export of data from Arbor SP systems
  - Disabled by default
  - Netflow-based statistics and alerts
  - Current estimate is that ATLAS monitors around 25% of the global Internet traffic
  - ATLAS provide the data for Google's Digital Attack Map

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ATLAS: A GLOBAL VIEW

Period	Average Attack size (bps)	Peak Attack Size (bps)
2014 Q1	1.12Gbps	325.06Gbps
2014 Q2	759.83Mbps	154.69Gbps
2014 Q3	858.98Mbps	264.61Gbps
2014 Q4	830.37Mbps	267.21Gbps
2015 Q1	804.12Mbps	334.22Gbps
2015 Q2	1.04Gbps	196.35Gbps

World 2015 Q2 Size Break-Out,BPS

- <500Mbps
- >500Mbps<1Gbps
- >1<2Gbps
- >2<5Gbps
- >5<10Gbps
- >10<20Gbps

World 2015 Q2 Break-Out Duration

- <30 Mins
- >30<60 Mins
- >1<3 Hours
- >3<6 Hours
- >6<12 Hours

World 2015 Q2 Attack Destinations

- CN
- US
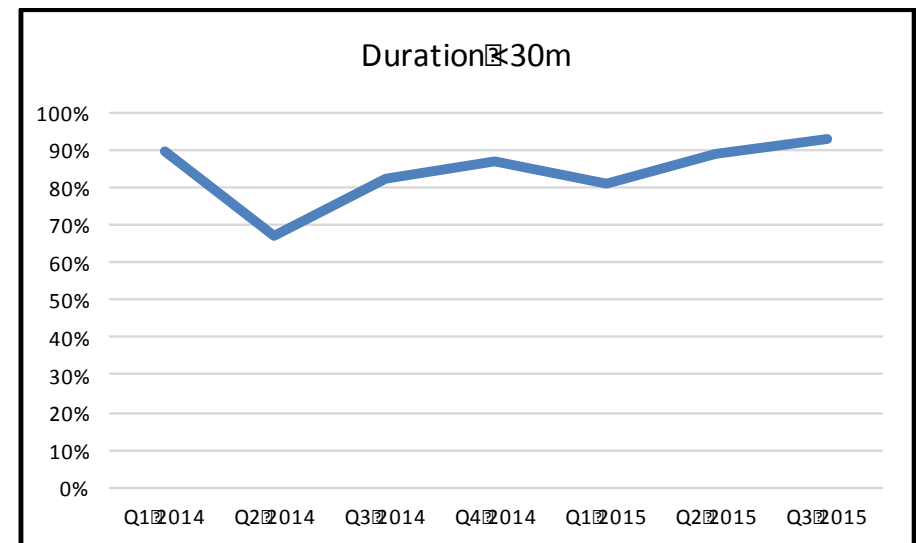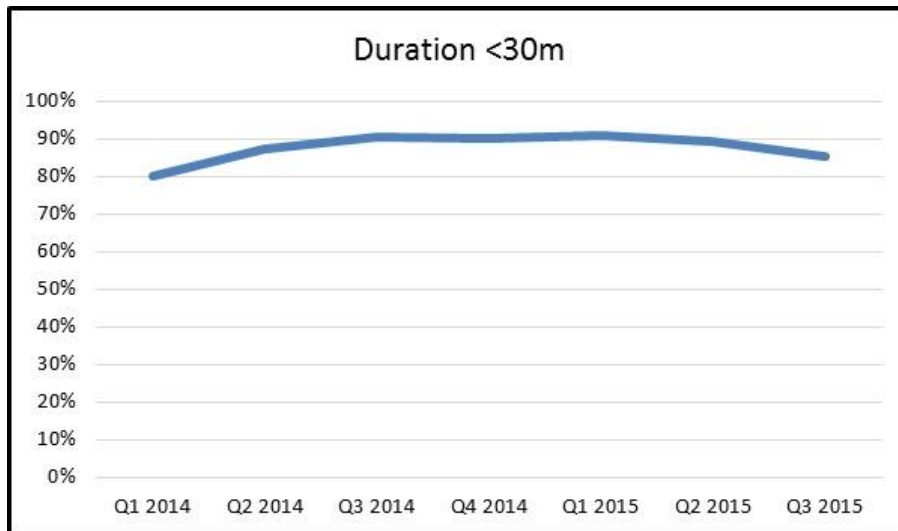- FR
- KR
- CH
- MY
- Unknown
- CA
- AU

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ATLAS DATA

- 21 Months of data, 2014-2015, over 20.000 events analyzed
- **Duration of attacks**
  - Most attacks are relatively short and small
  - Need for protection: real time, app layer, customer premises

Duration <30m

Duration <30m

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ATLAS DATA

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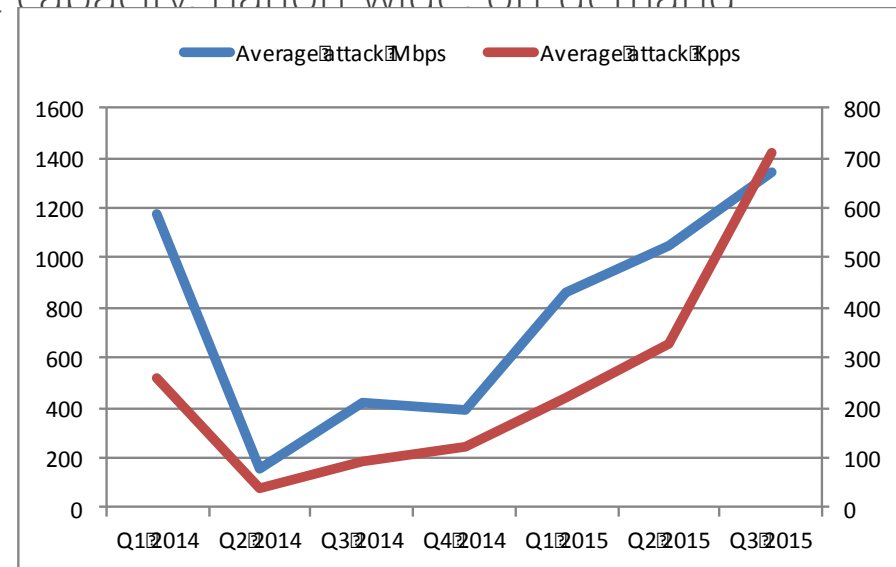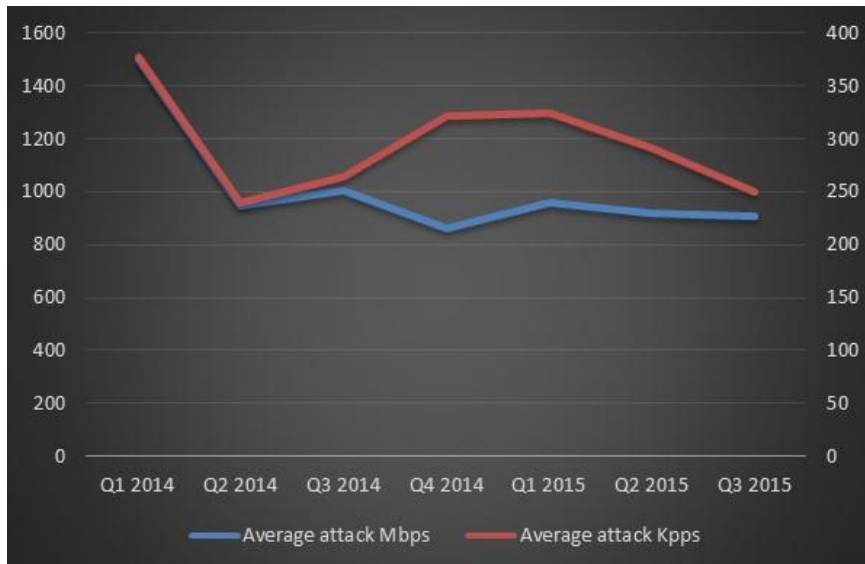 - Need for protection: real time, app layer, customer premises
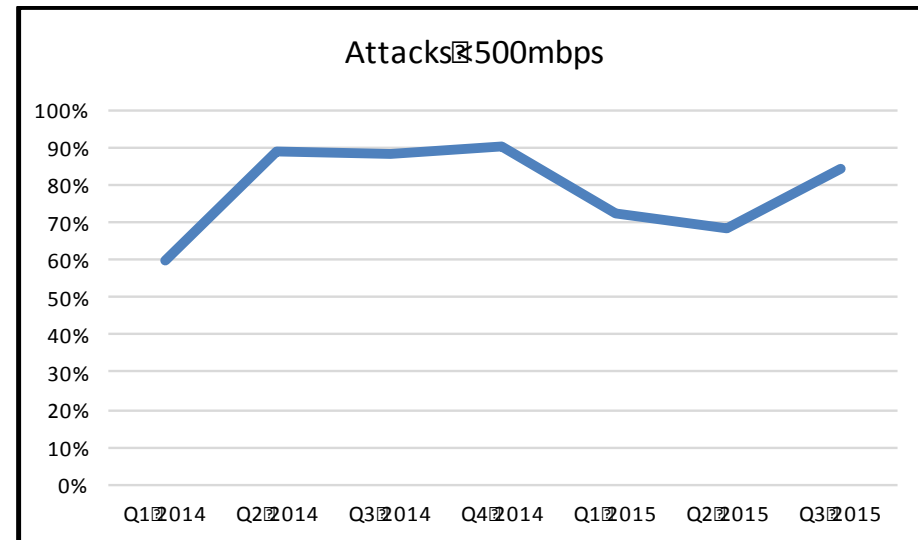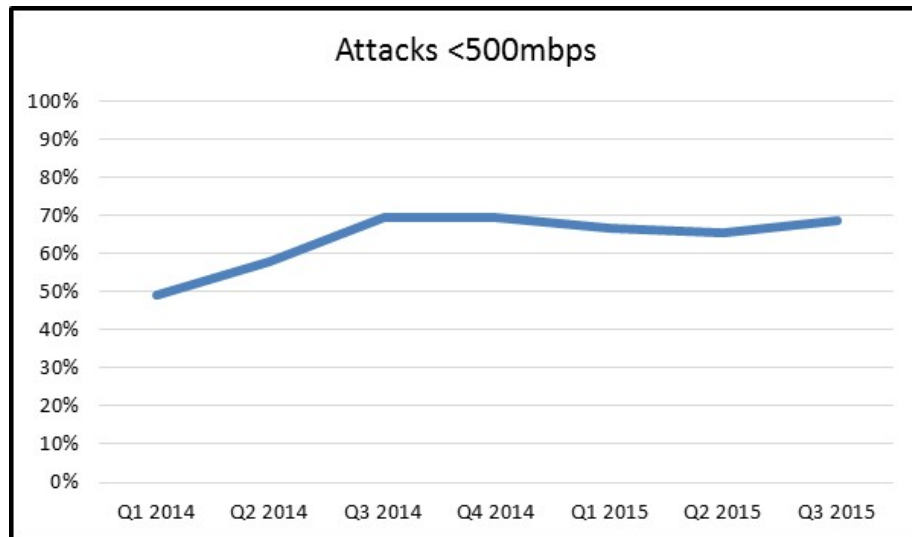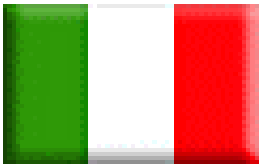
- **Average size of attacks**
  - Average size keeps growing: larger bandwidth is available to consumers worldwide and can be exploited for reflection/amplification attacks as well as other types of floods
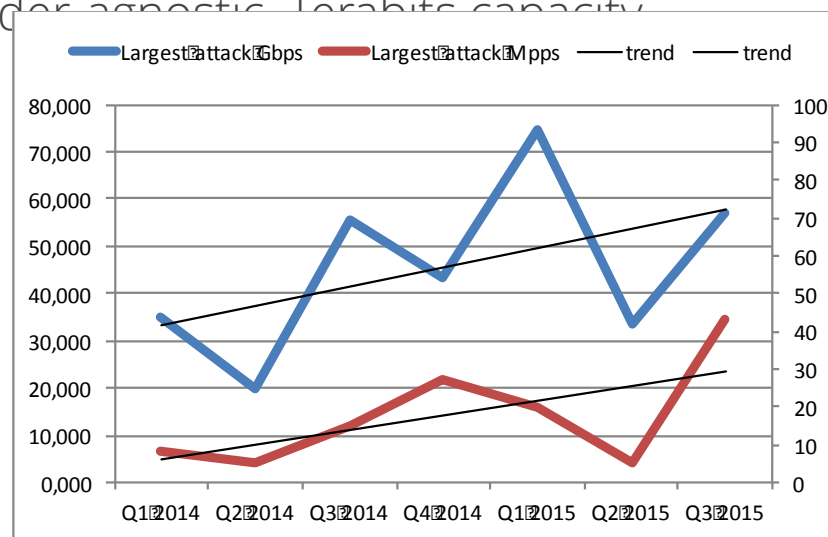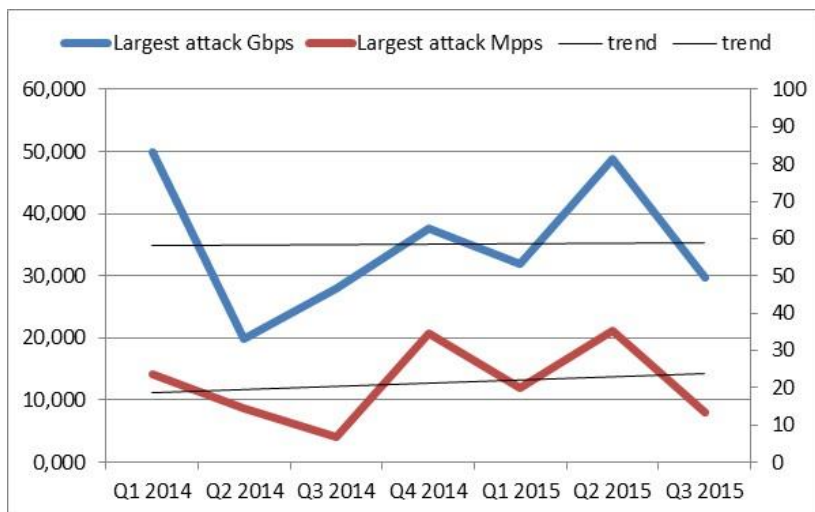 - Need for protection: multi-gigabit capacity, nation-wide, on-demand

ATLAS DATA

- ## Peak size of attacks
  - Exploitation of amplification attacks on a rage of protocols (DNS, NTP, SSDP, SNMP, etc.) can have infrastructure impact and generate collateral damage
  - Rare but catastrophic events
  - Need for protection: global, provider agnostic, Terabits capacity

ARBOR NETWORKS SUMMARY

Topics

Highlights

Protect means: Business, Credibility, Market Share