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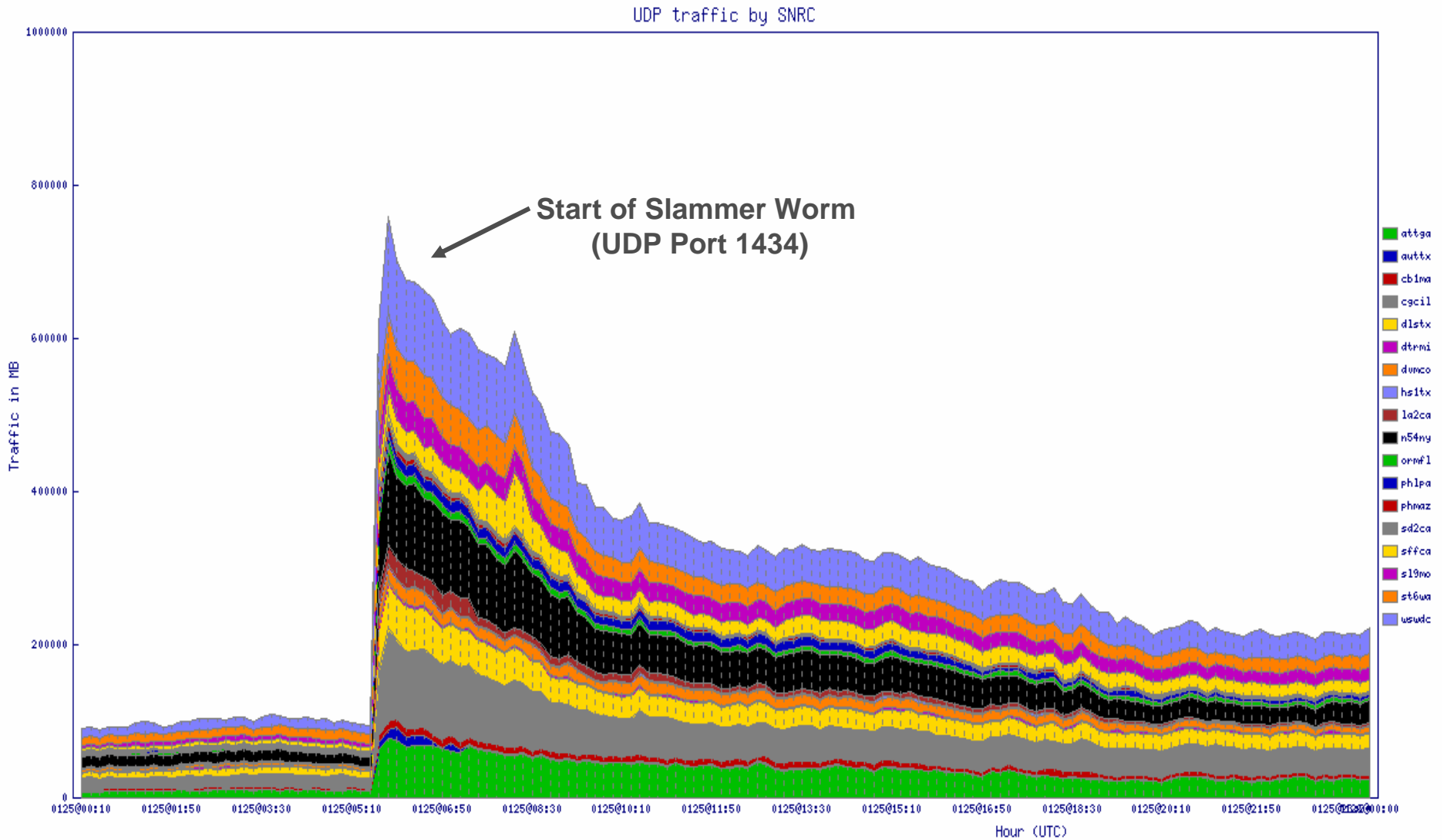


Network-Based Security for Global Infrastructure

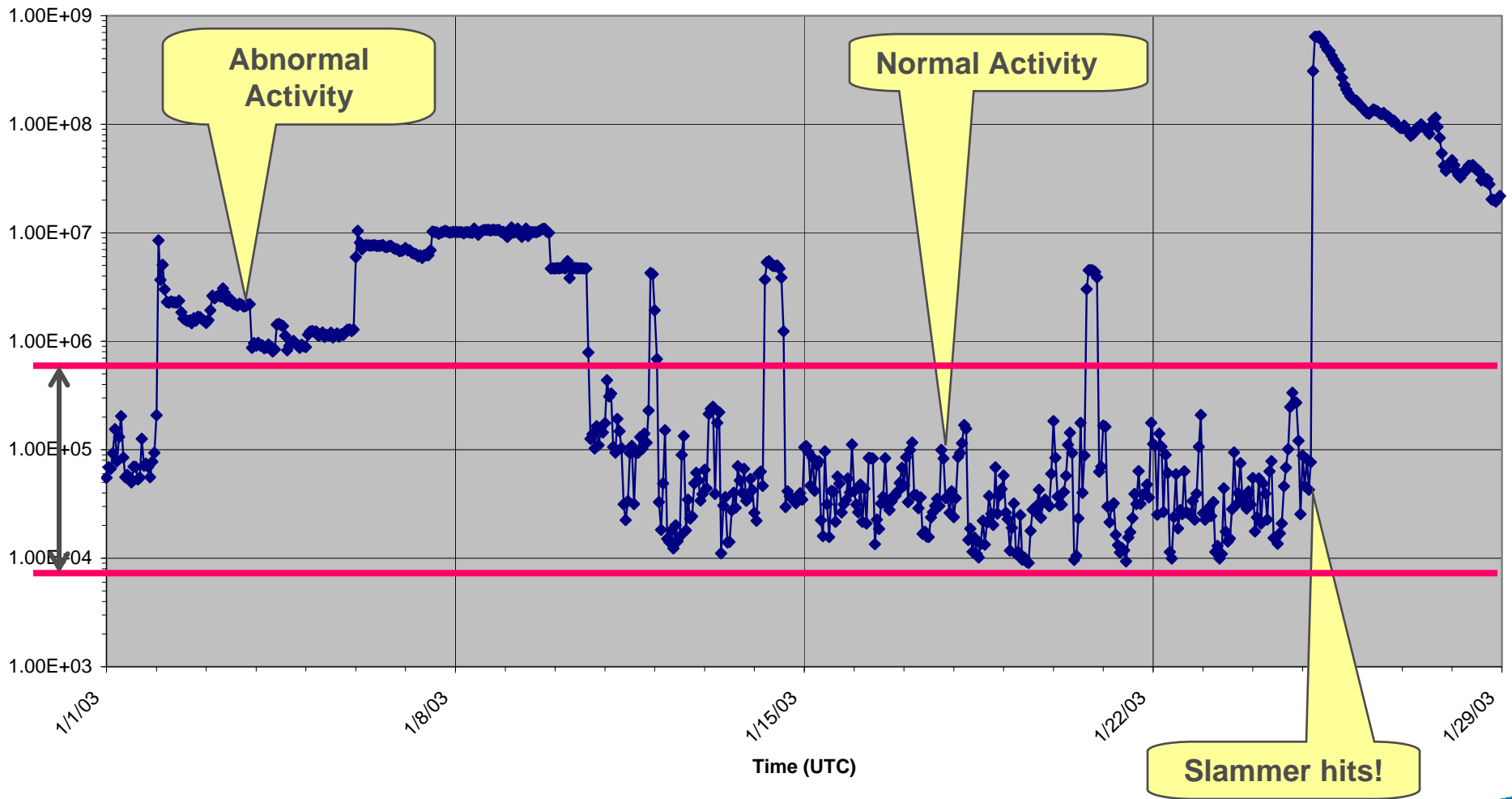
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Slammer Worm / Conventional View – 2003

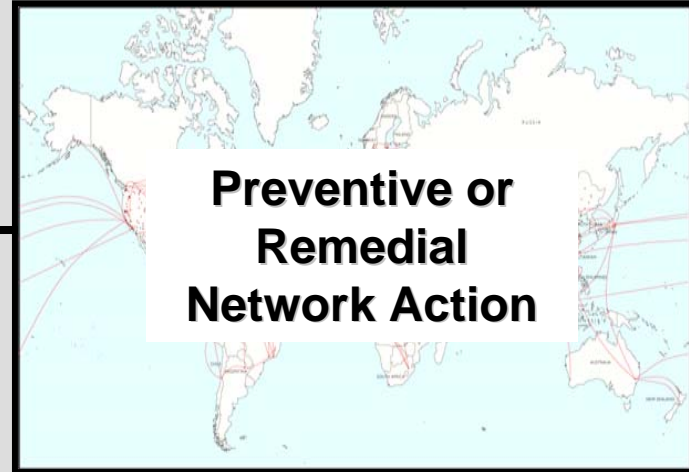
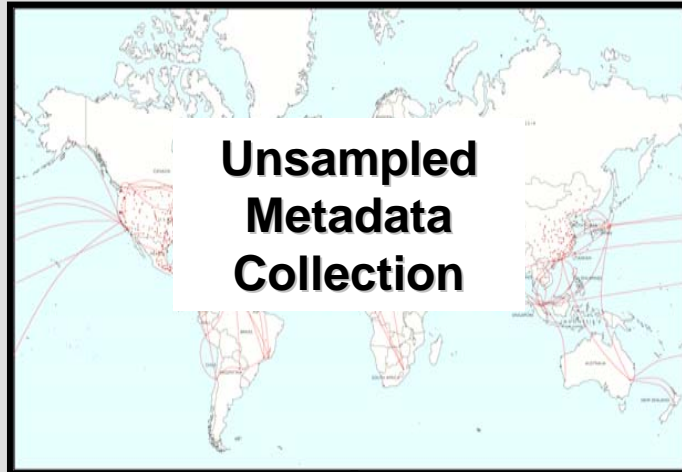


Slammer Worm / Unconventional View – 2003



Carrier Backbone-Based Infrastructure Protection

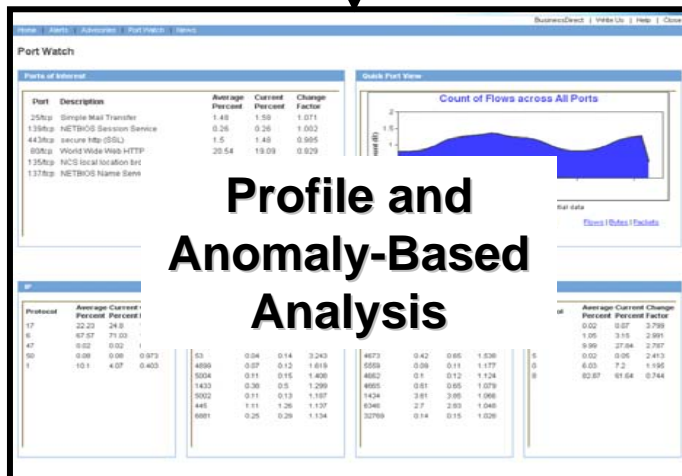
Network



Update

Security

Data



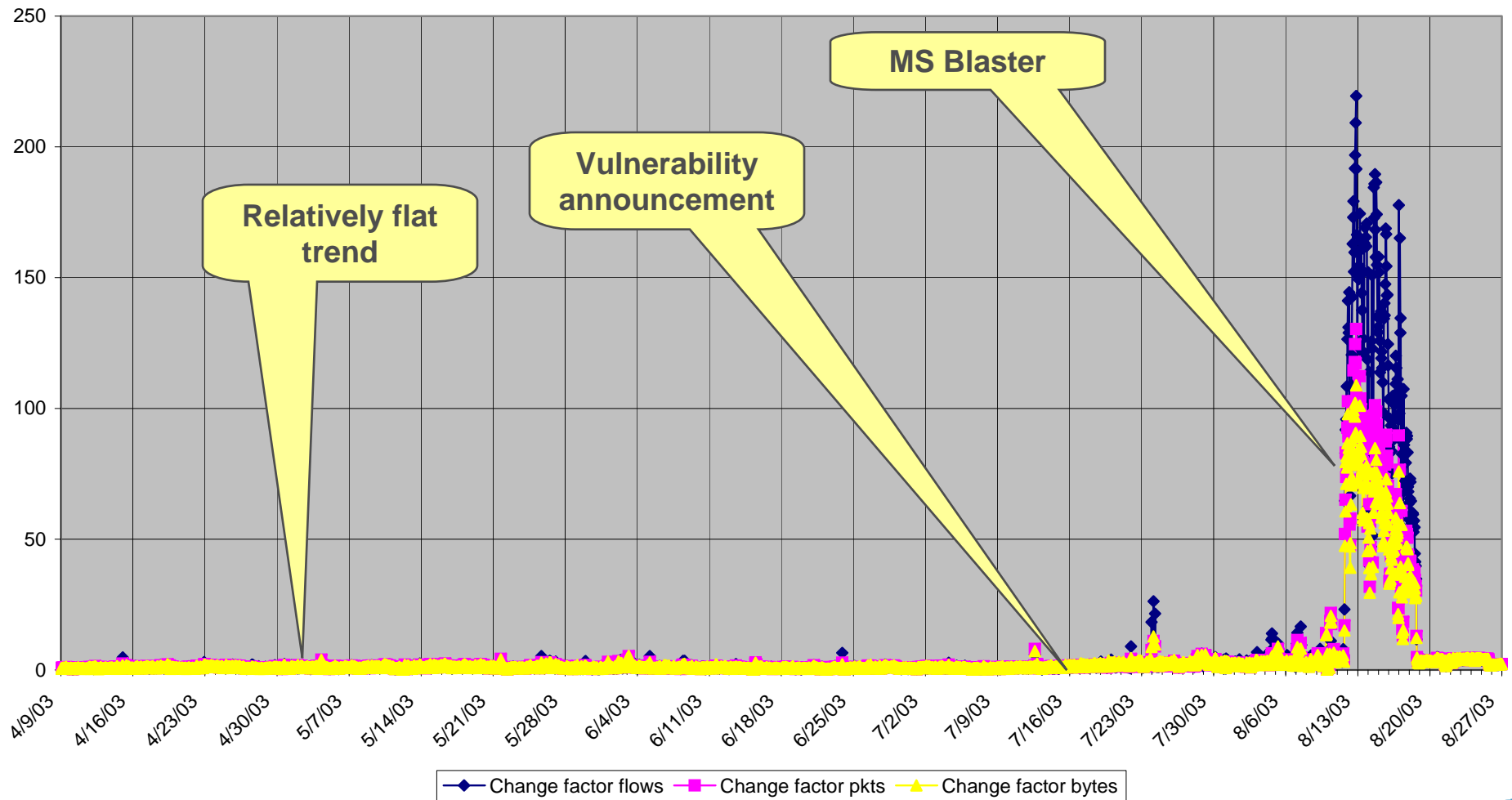
Alerts

Action



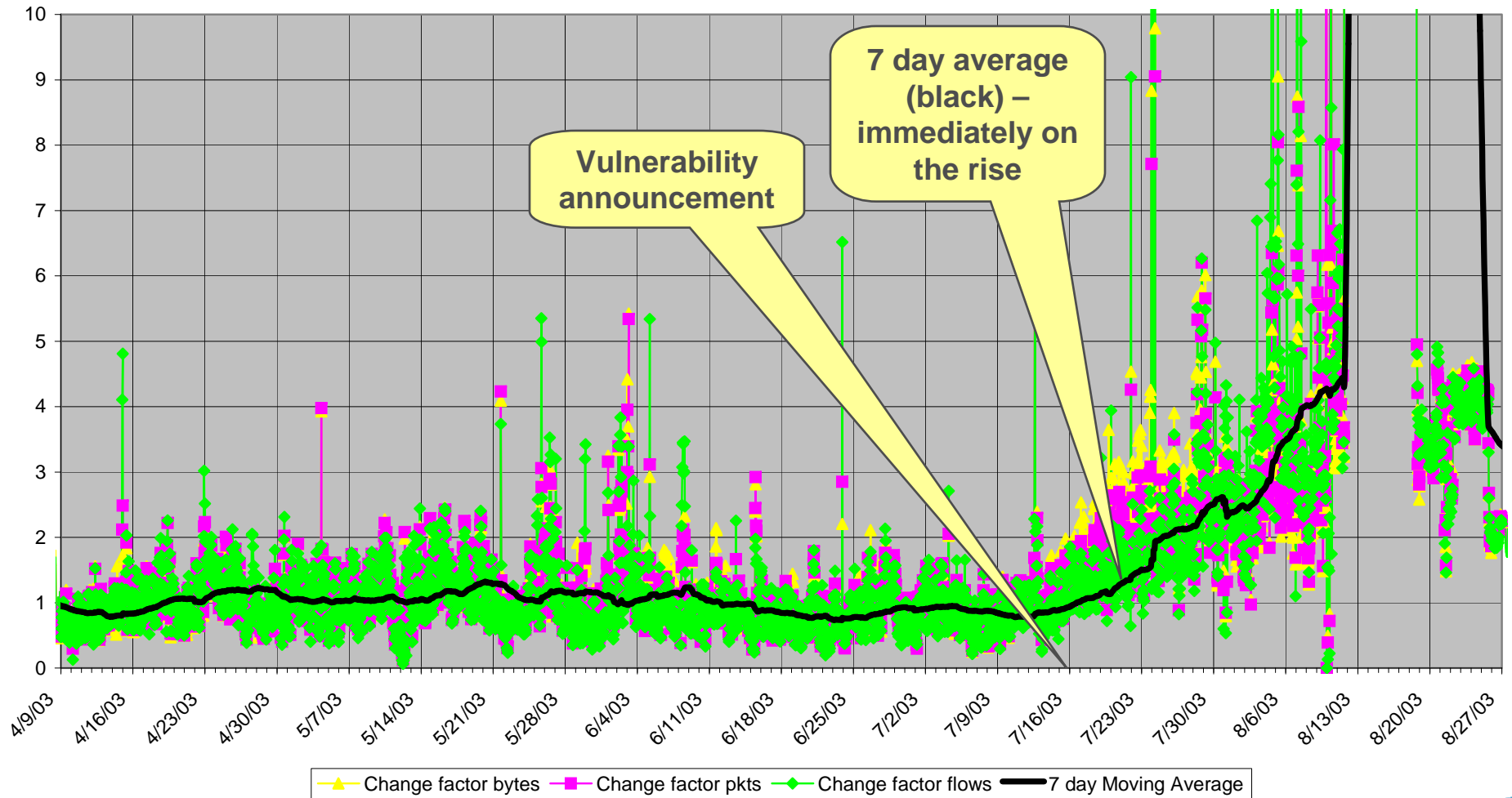
Blaster Worm / Course View – 2003

TCP-135 Change Factor Relative to 5 Week Mean

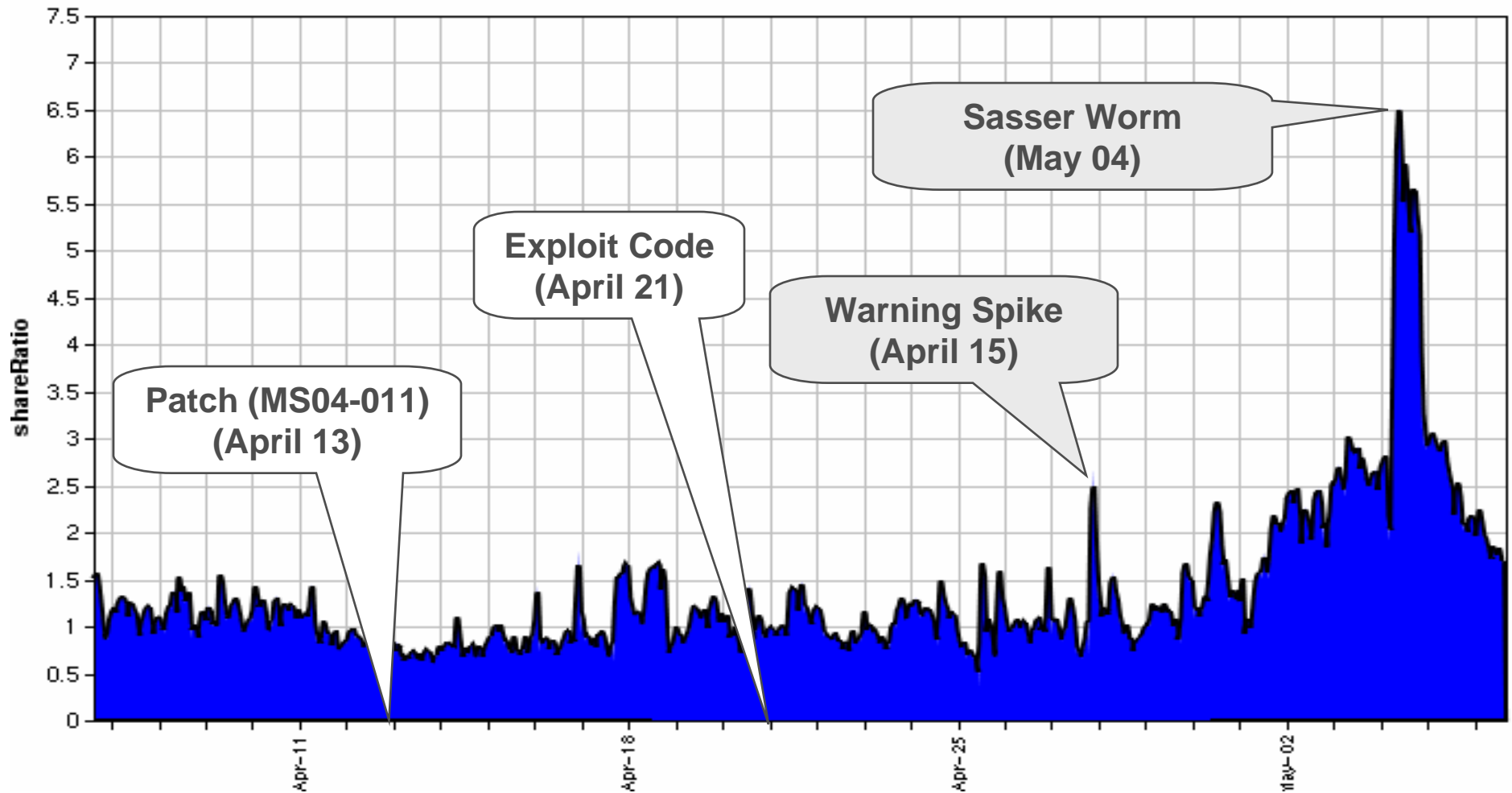


Blaster Worm / Fine View – 2003

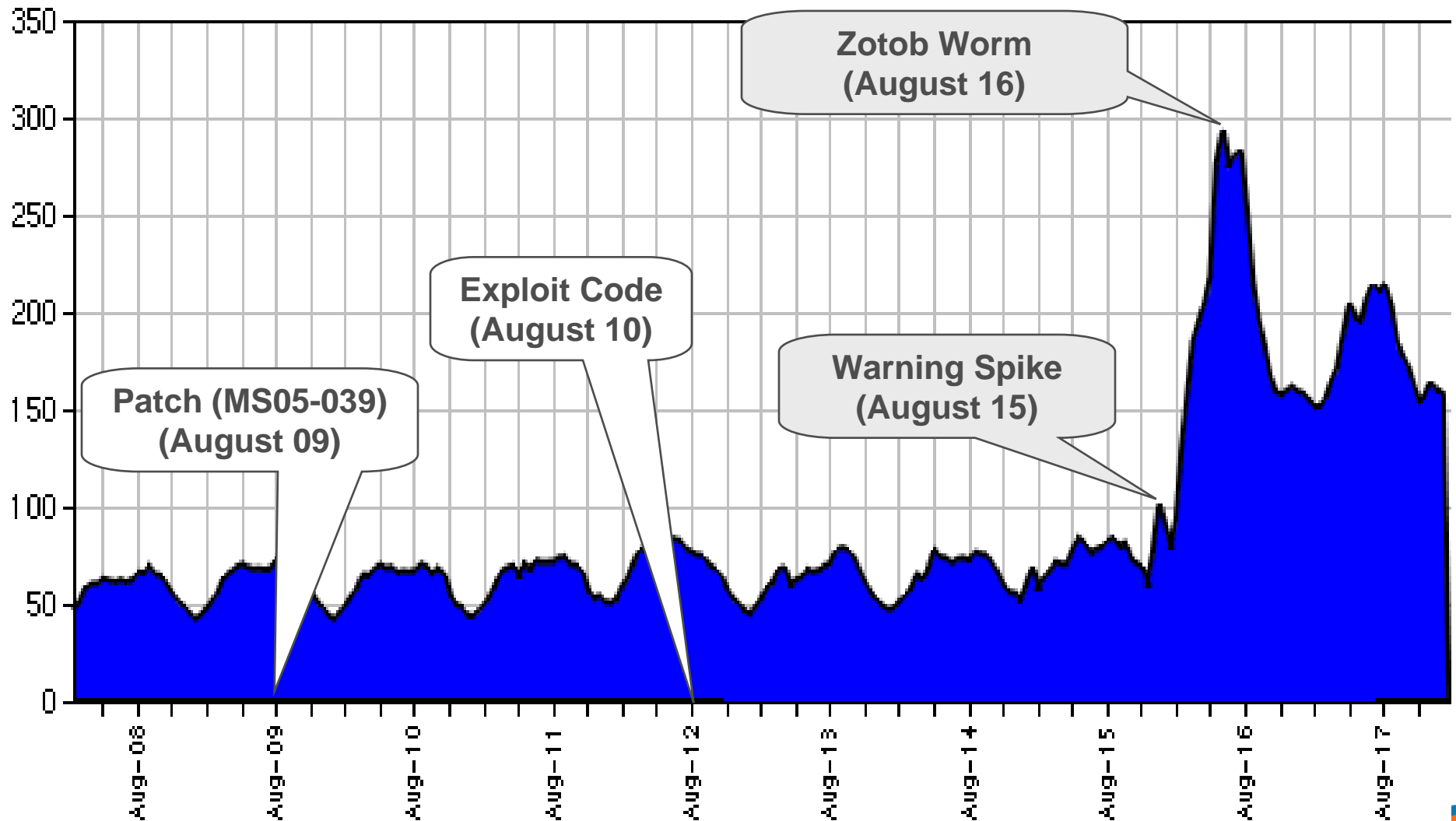
TCP-135 Change Factor Relative to 5 Week Mean



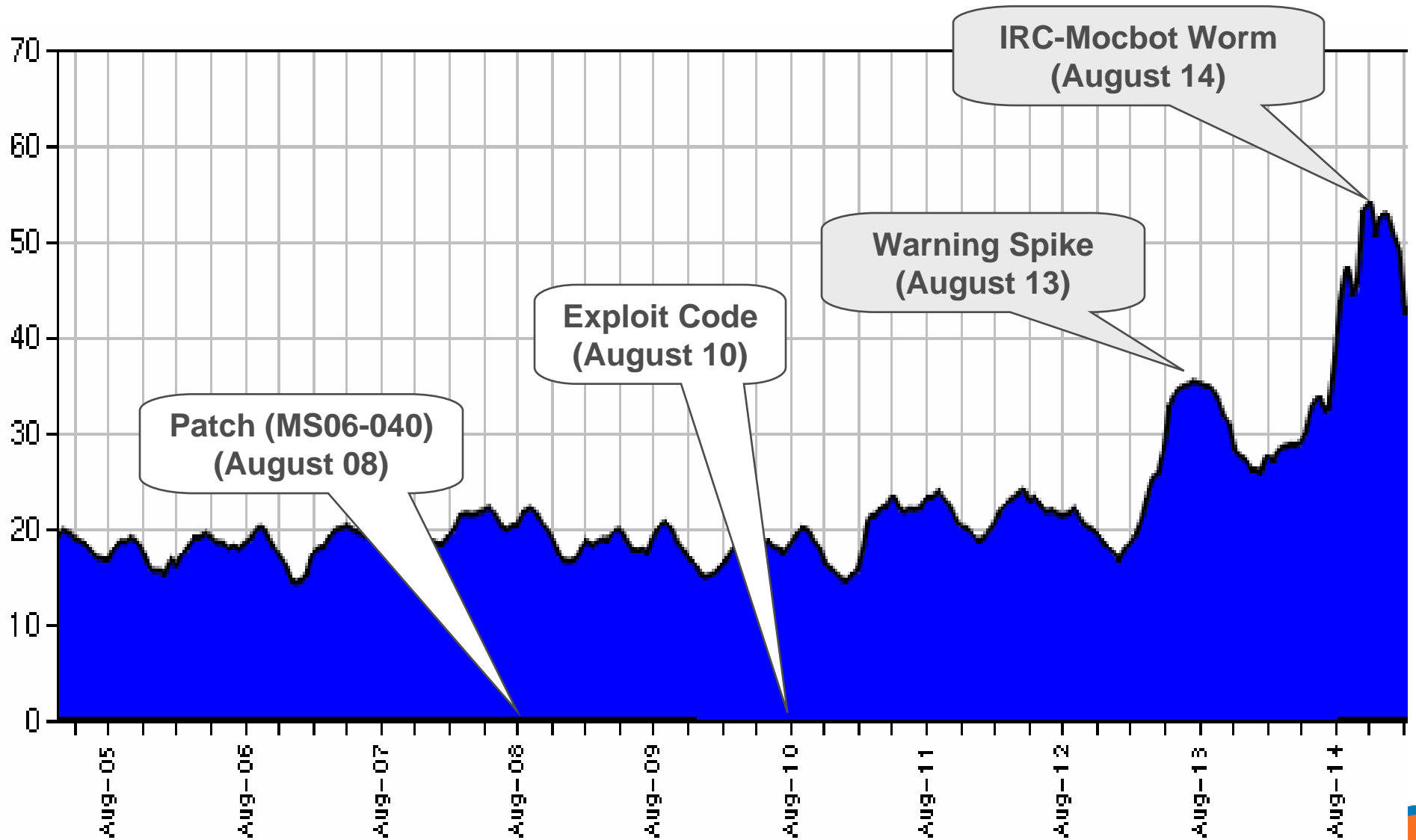
Sasser Worm – 05/04



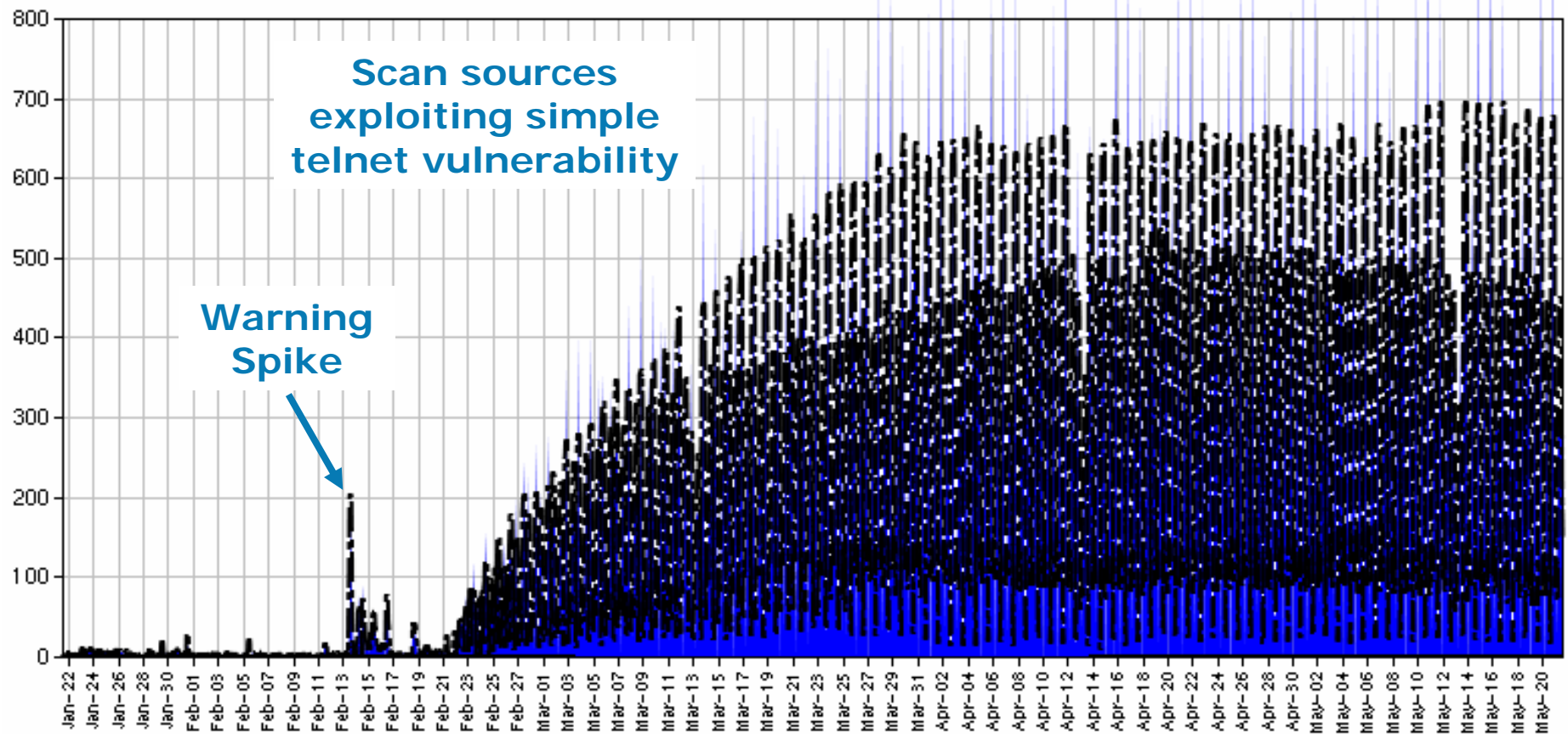
ZOTOB Worm – 08/05



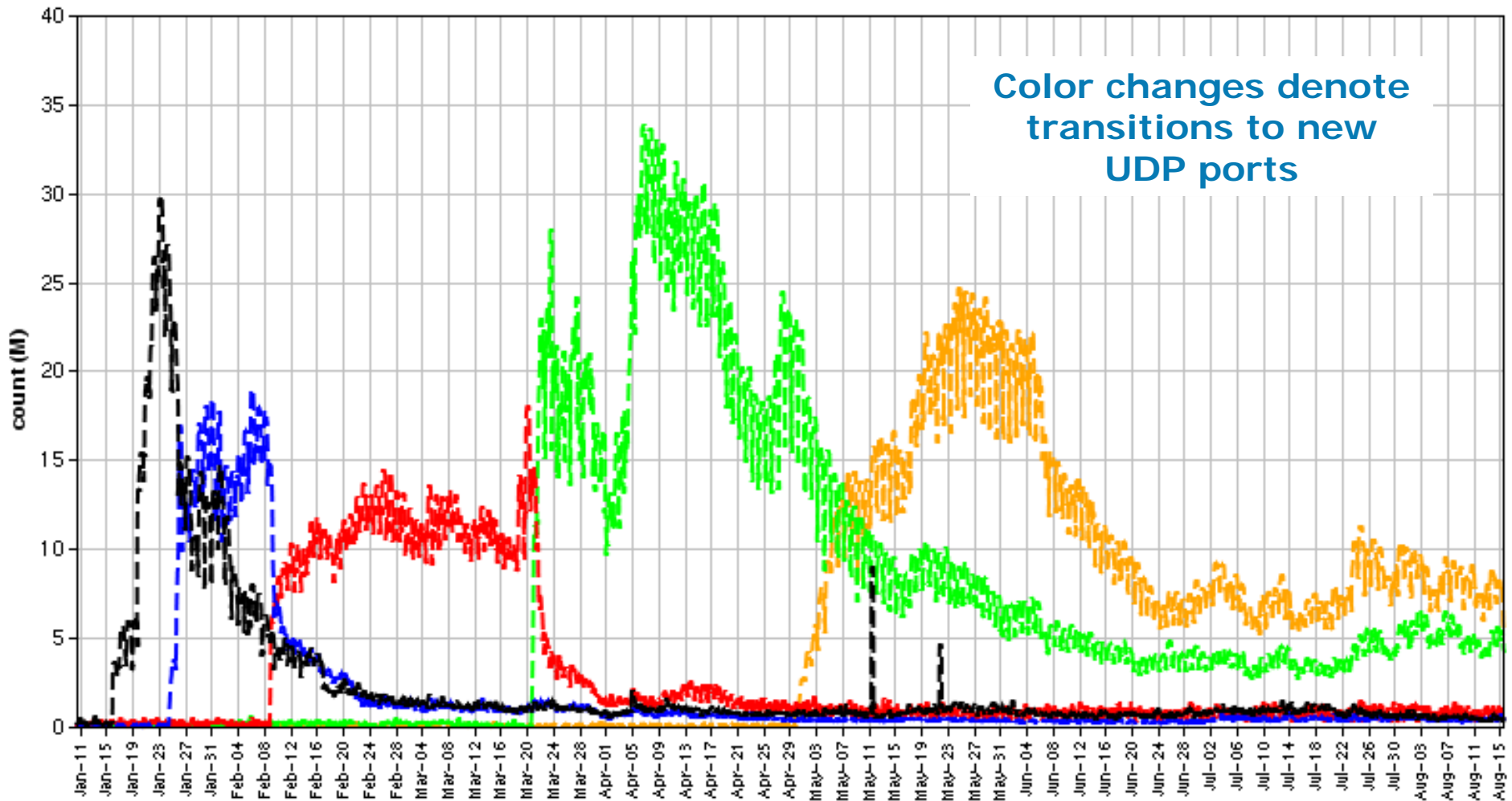
IRC-MOCBOT Worm – 08/06



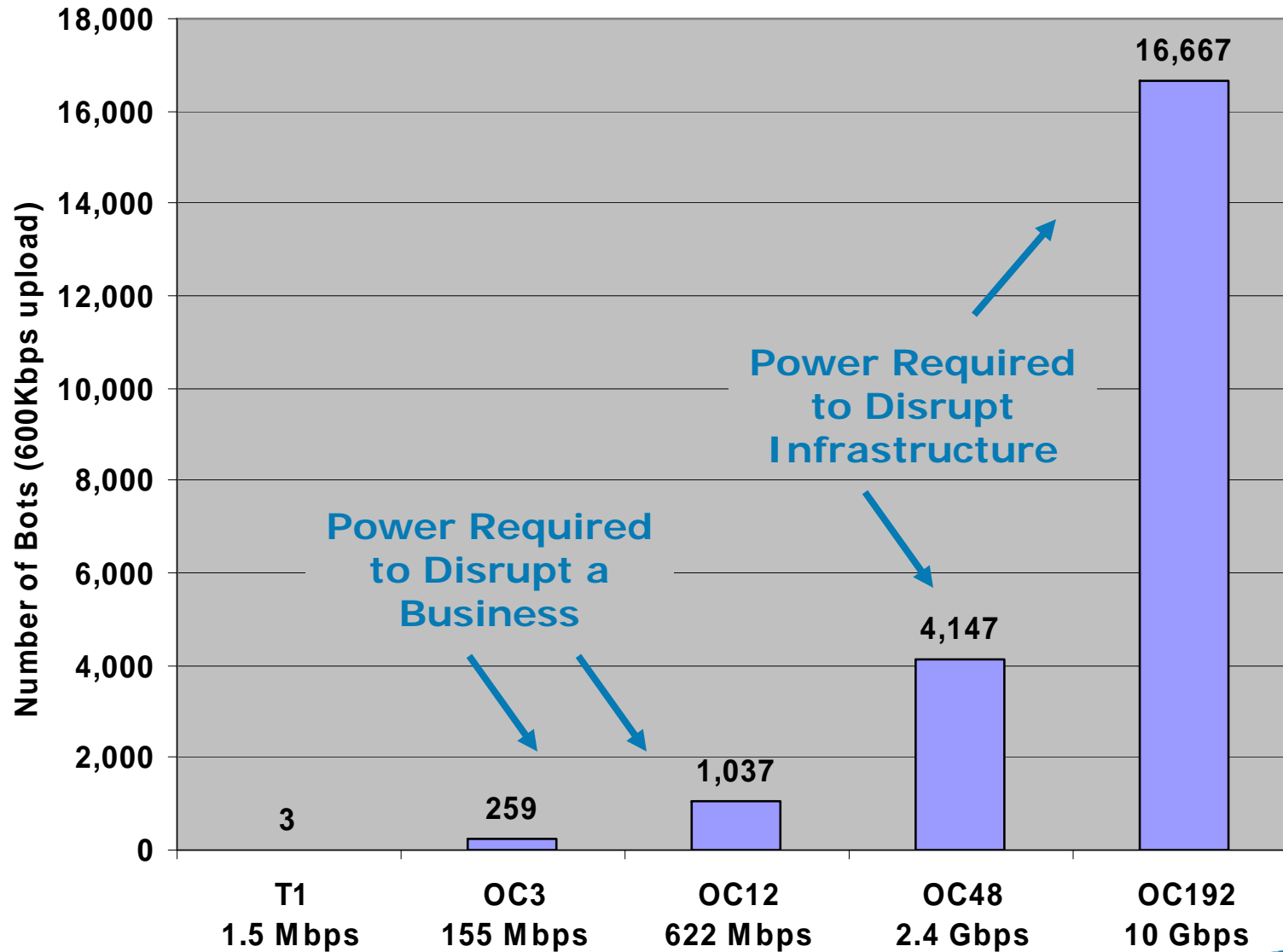
Solaris Wanuk Worm – 01/07 to 05/07 (snapshot)



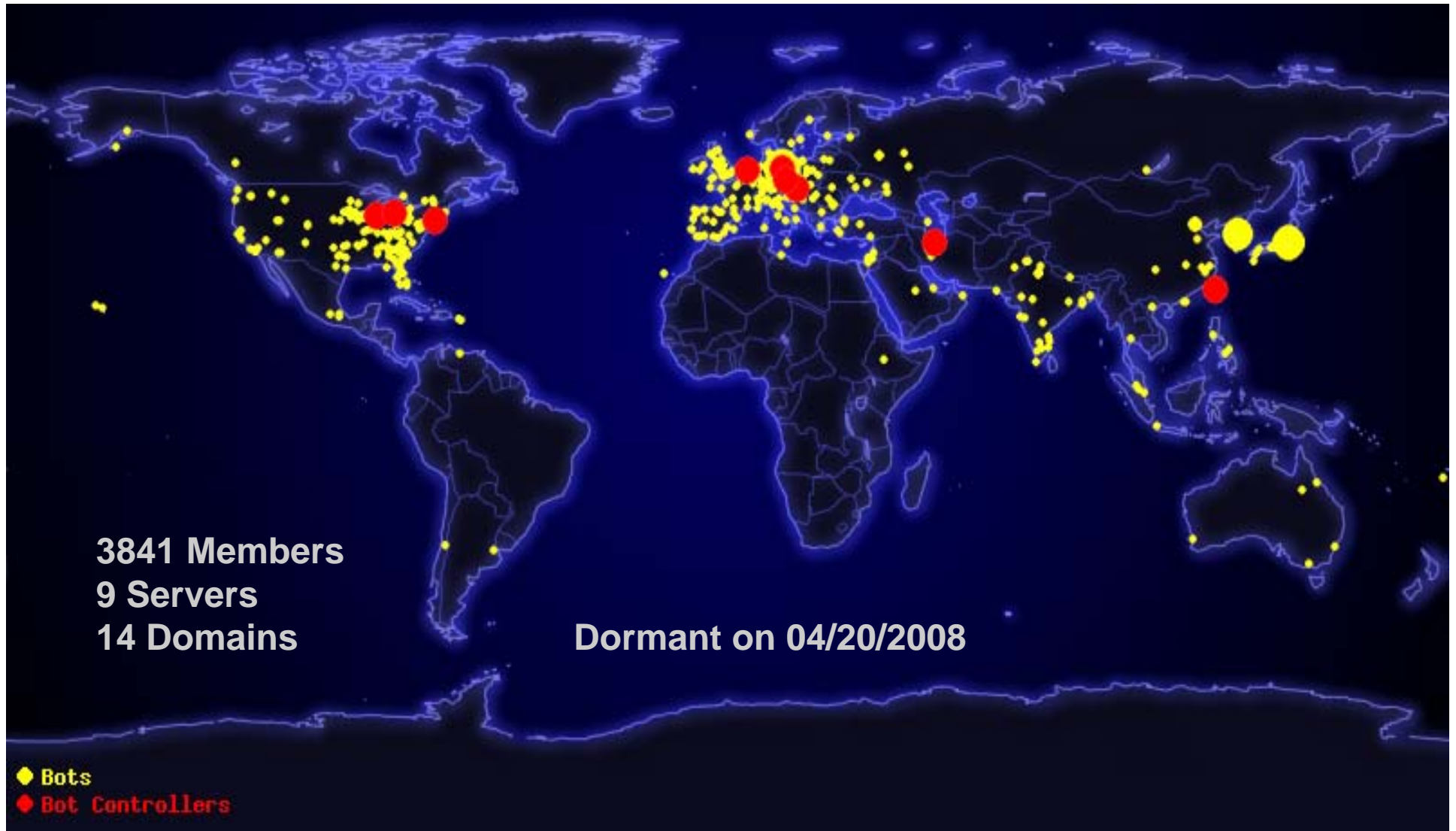
Storm Worm/Botnet – 01/07 to 08/07 (snapshot)



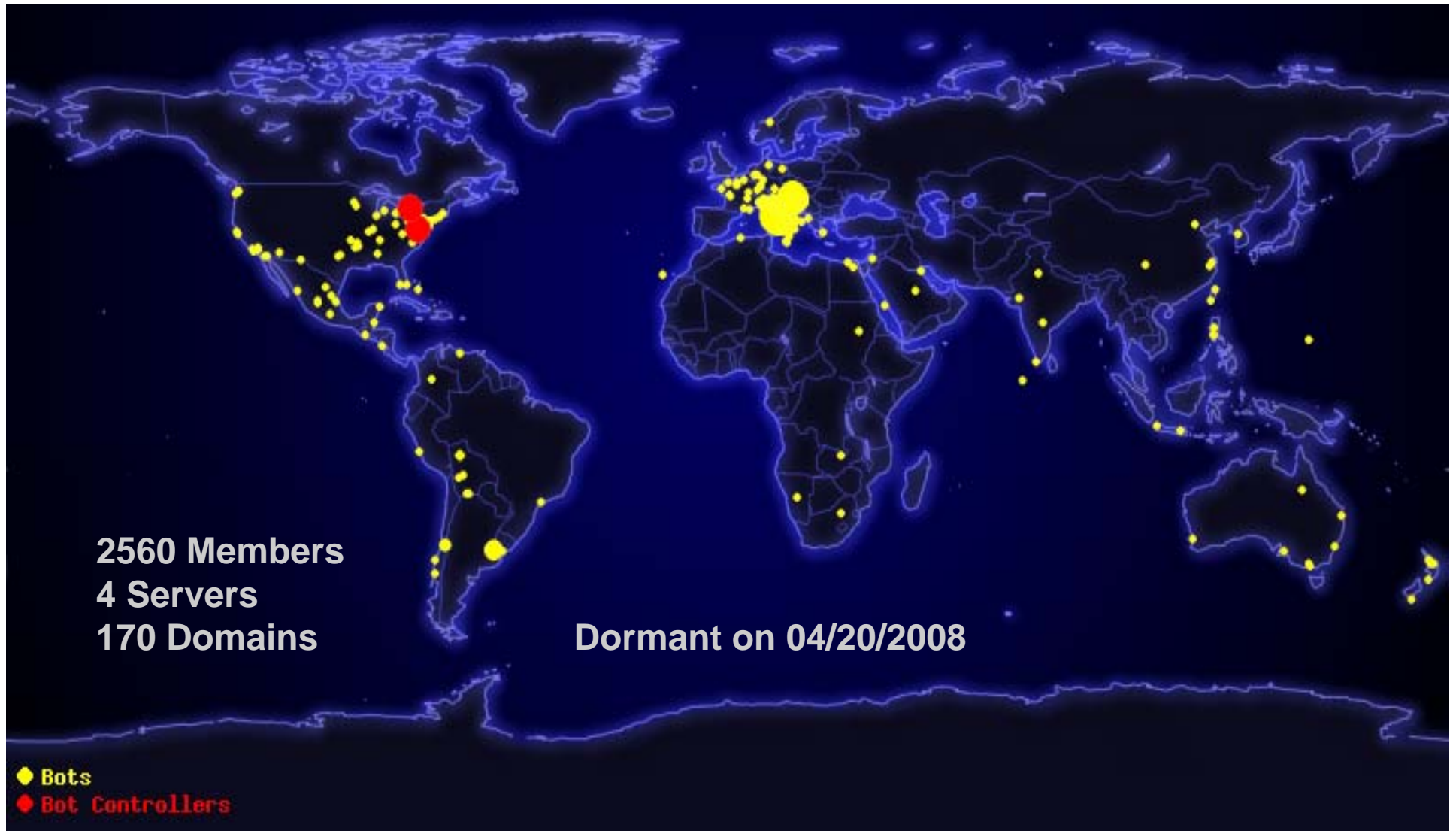
Illustrative Power of Botnets



Foolishfoe Botnet – 04/20/2008



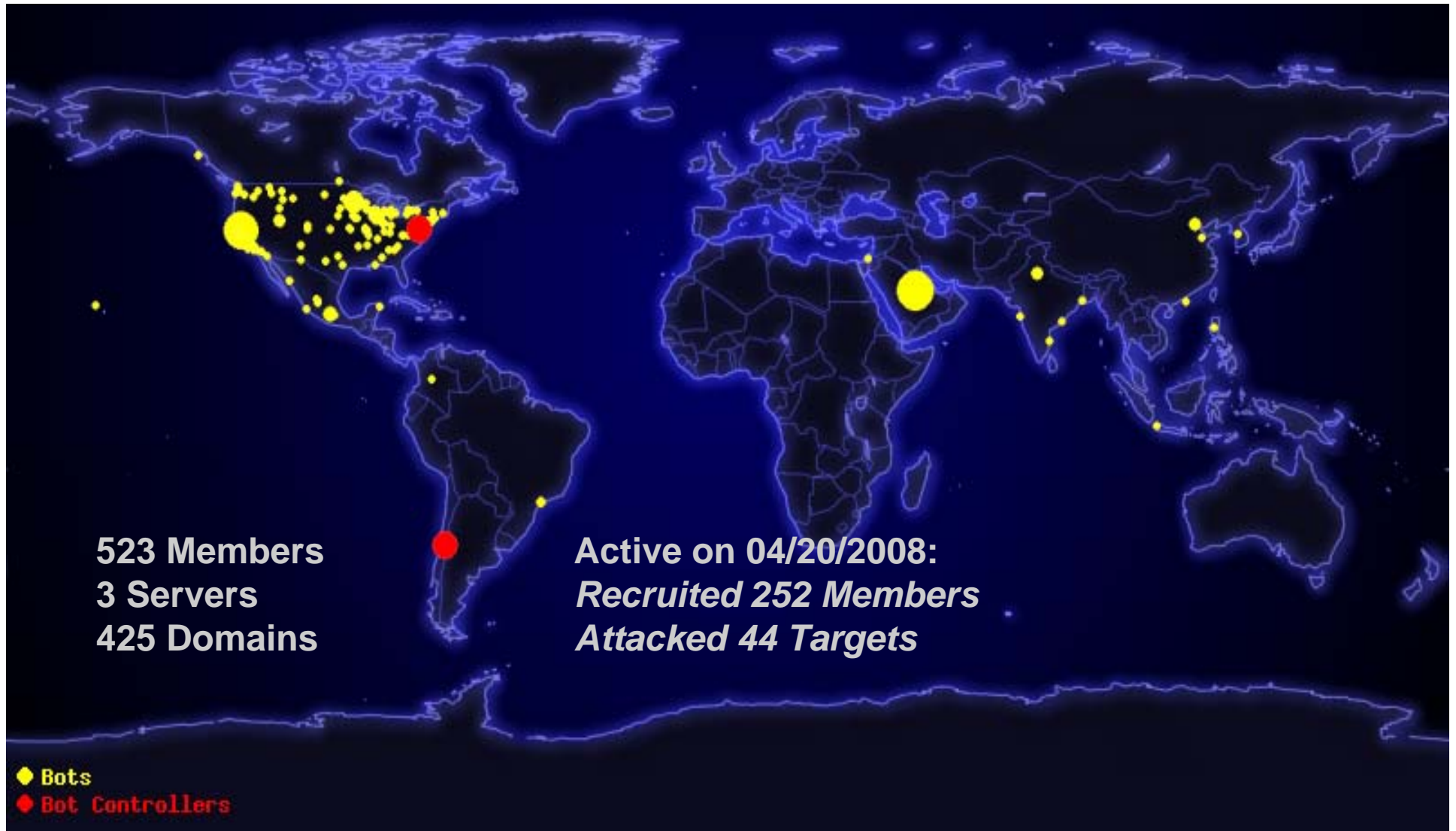
Fucuzzy Botnet – 04/20/2008



Nefarious Botnet – 04/20/2008



Debelizombi Botnet – 04/20/2008



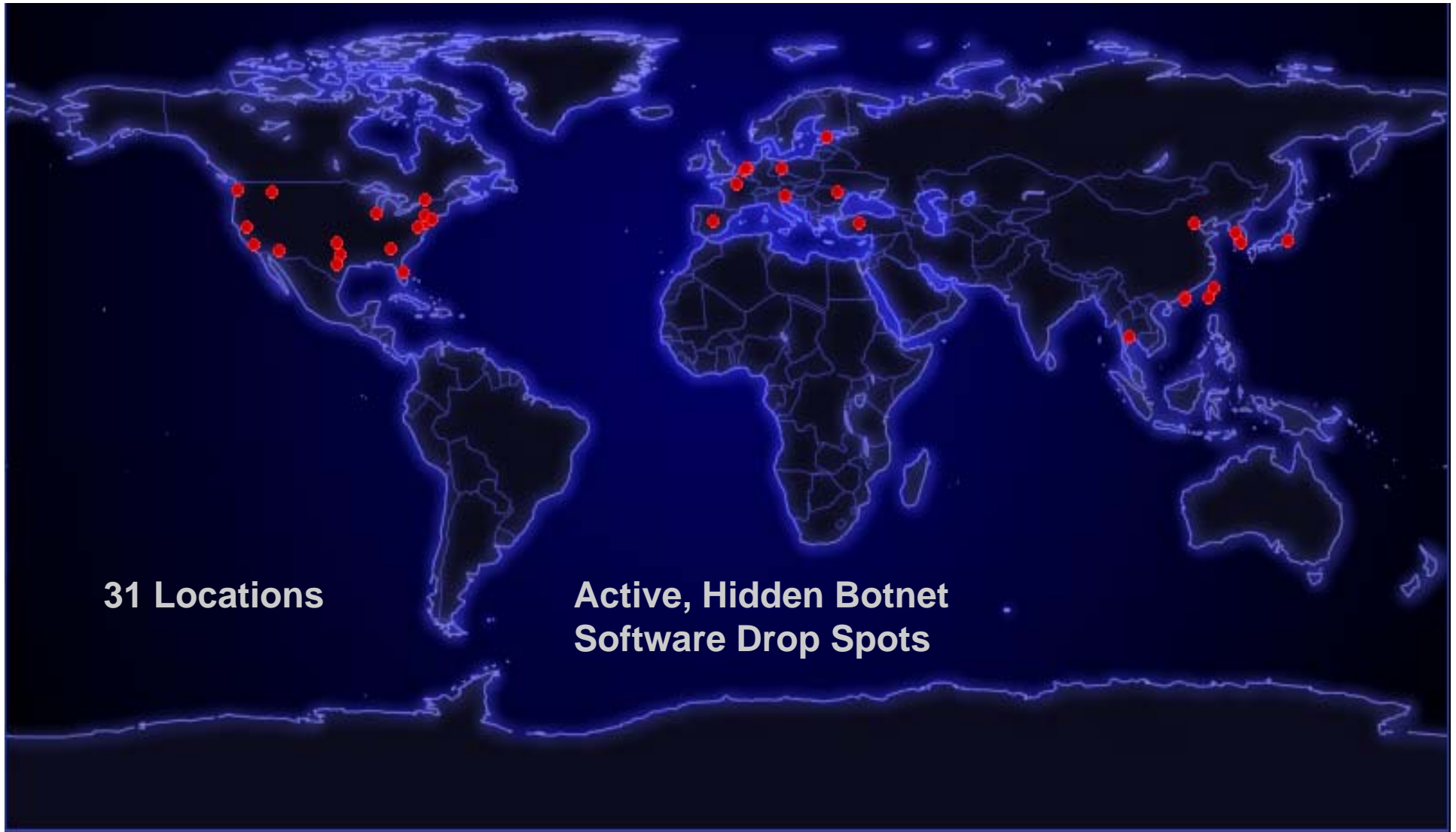
Swpower Botnet – 04/20/2008



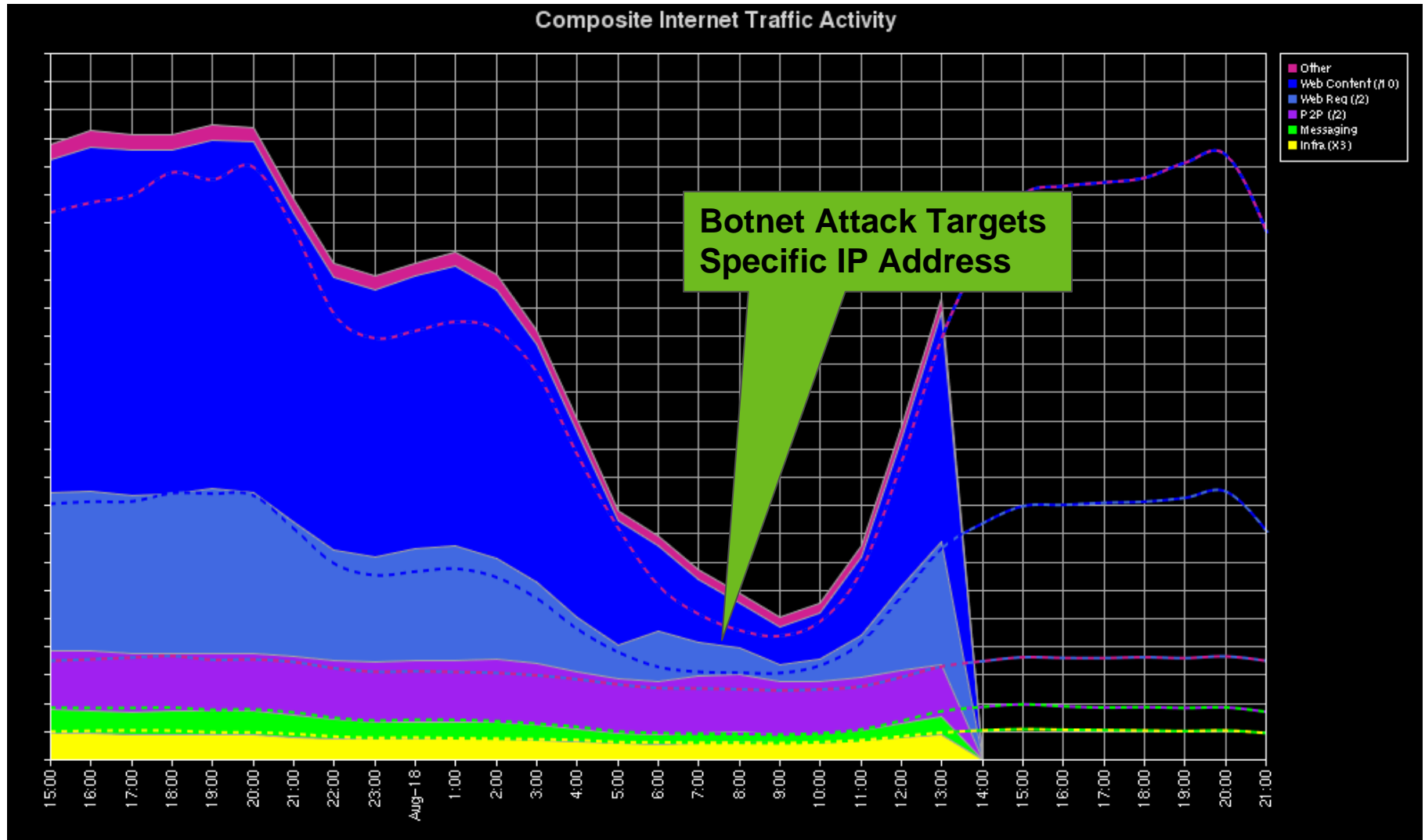
Nadersamar Botnet – 04/20/2008



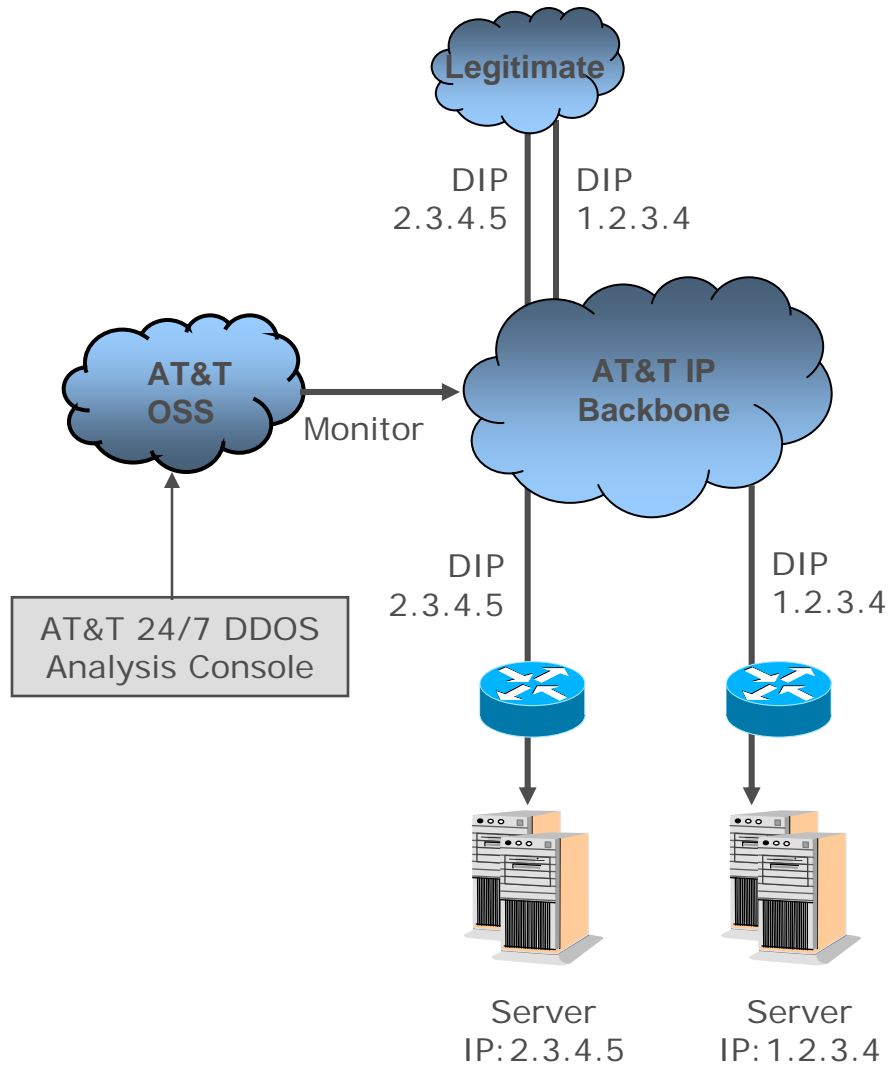
Botnet Arsenals – 04/2008



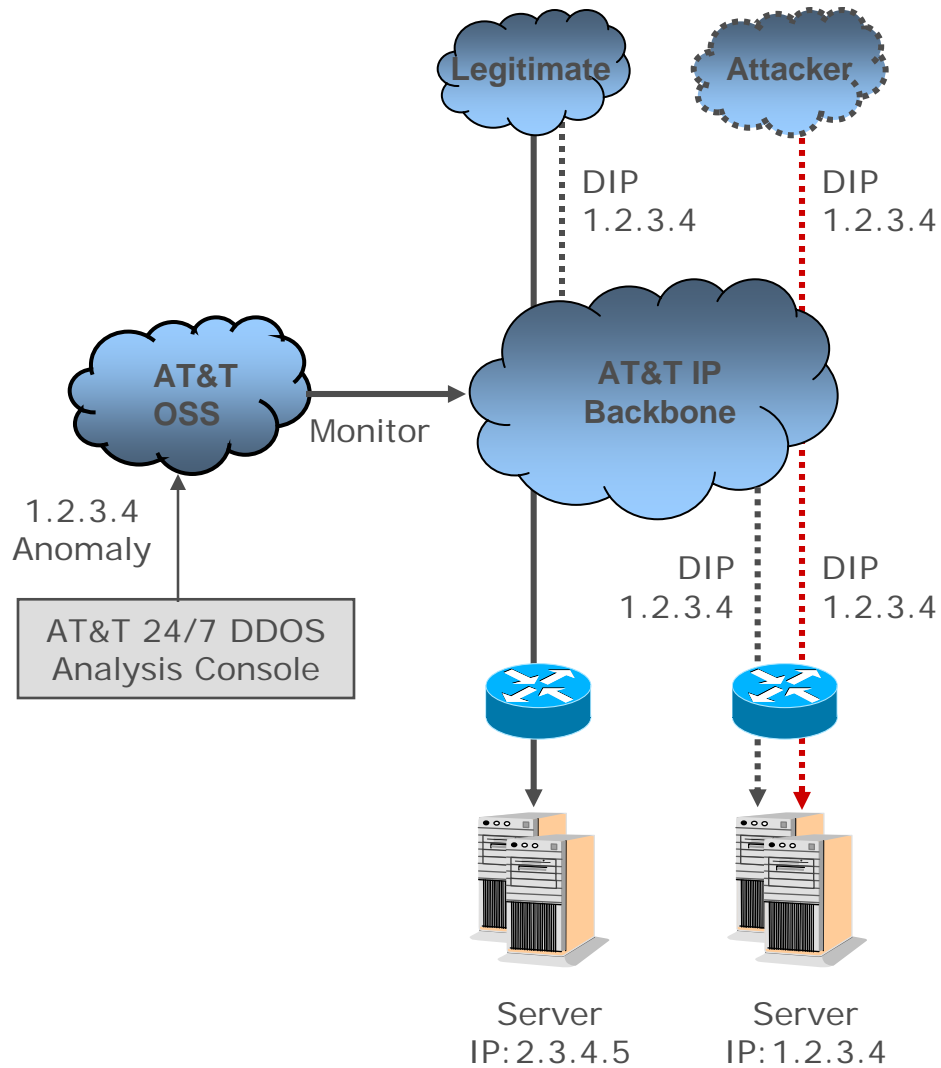
Typical DDOS Attack Visualized in Fusion Center



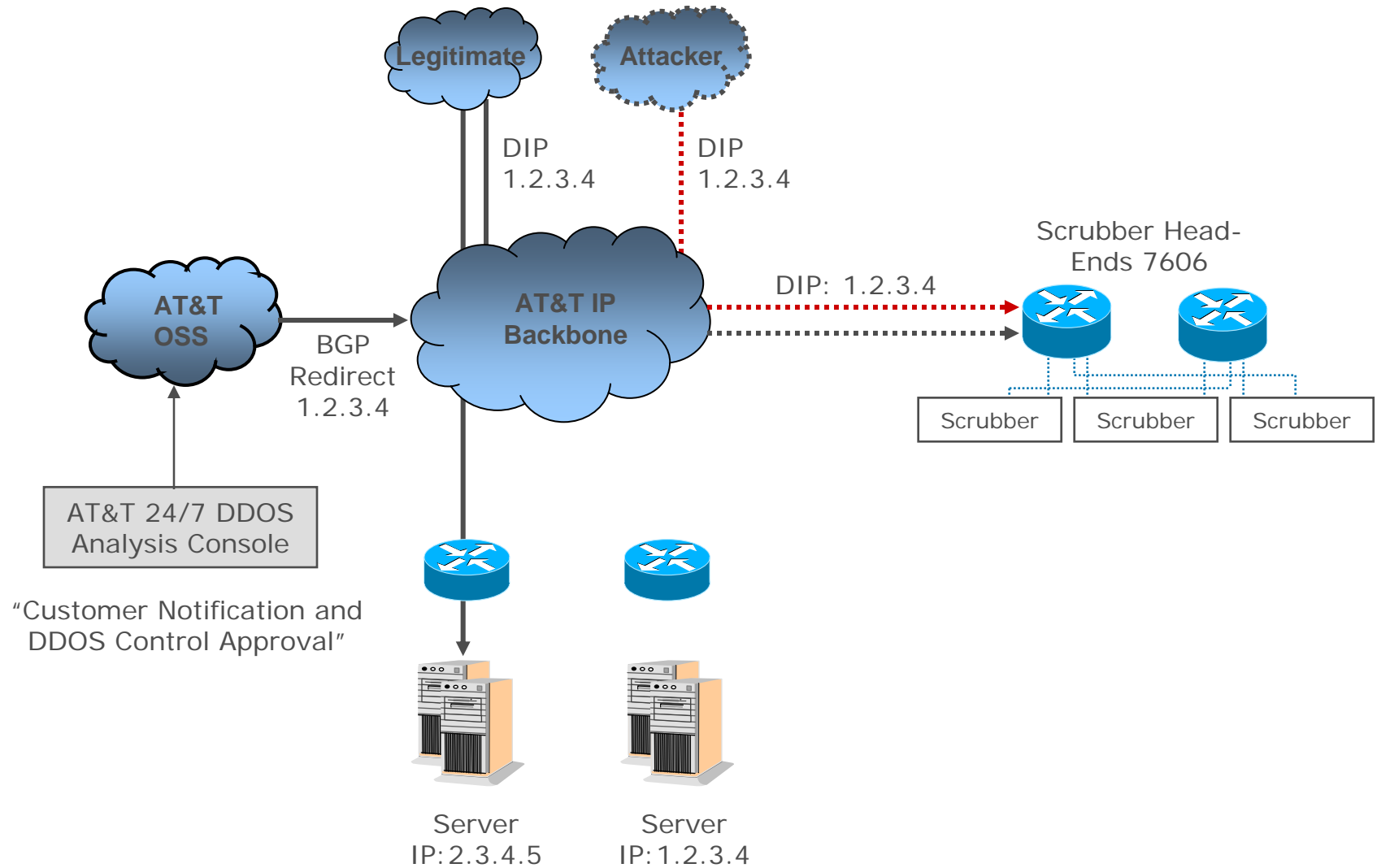
DDOS Security – IP Backbone Scrubbing



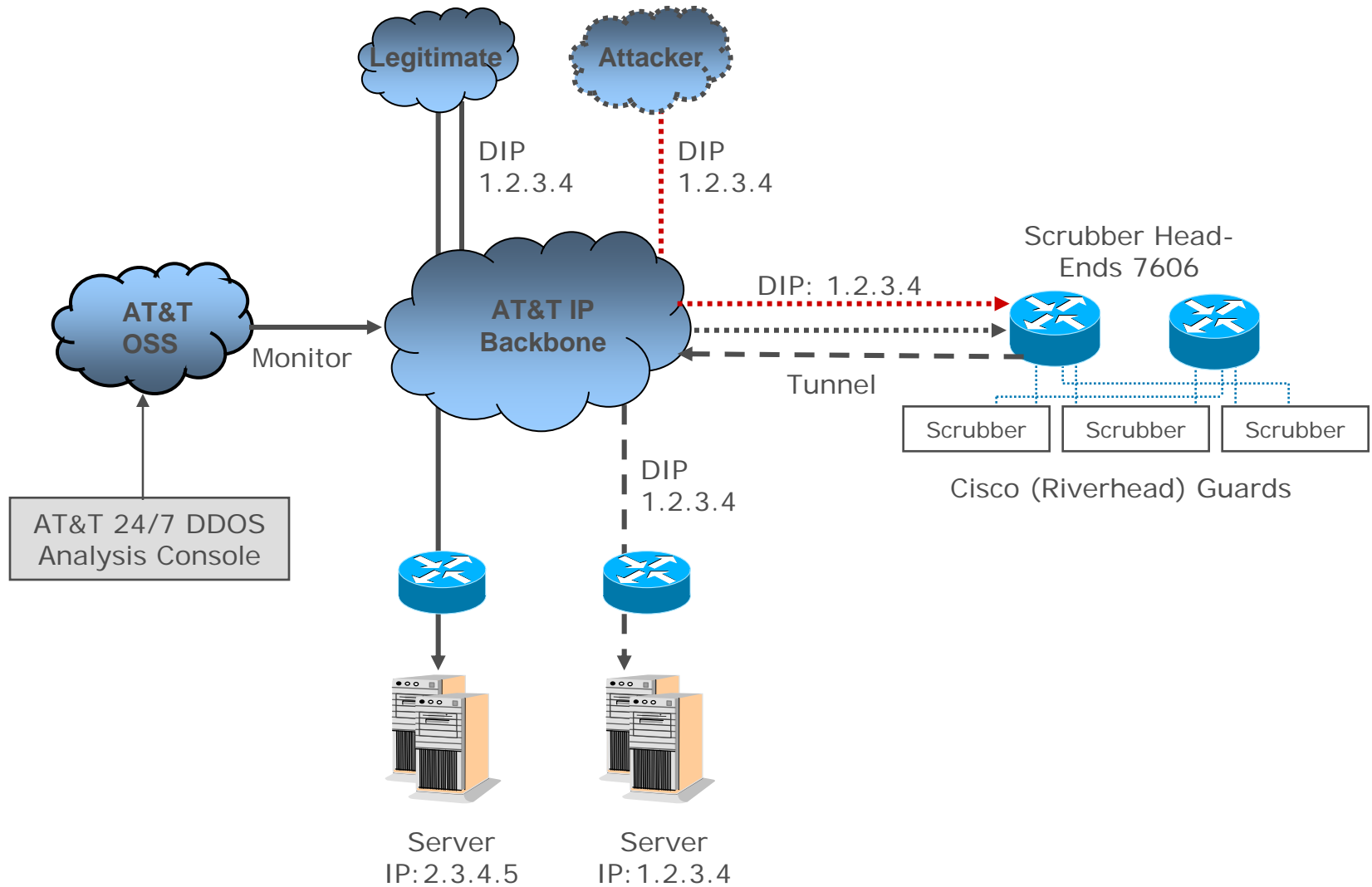
DDOS Security – IP Backbone Scrubbing



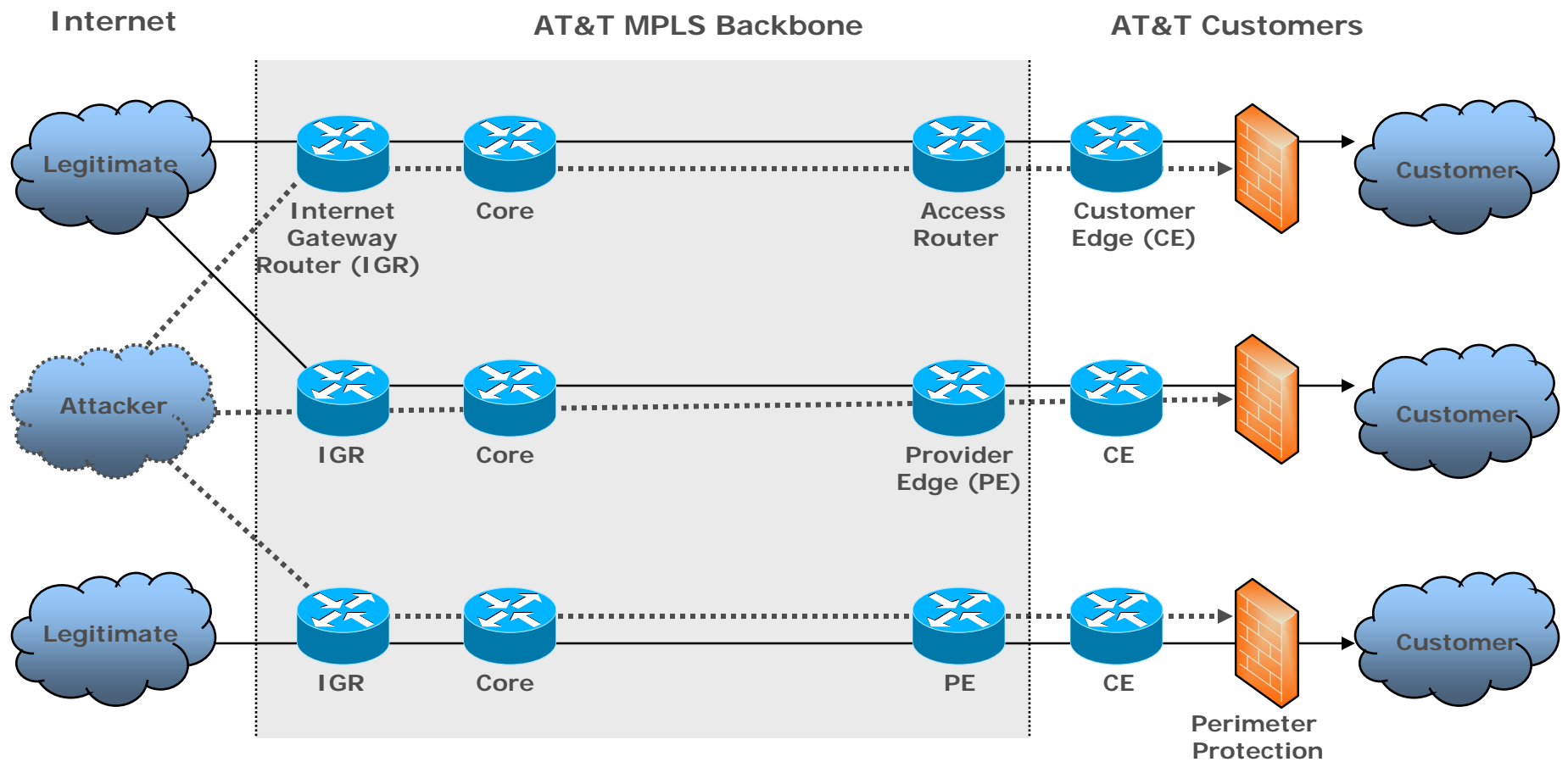
DDOS Security – IP Backbone Scrubbing



DDOS Security – IP Backbone Scrubbing



Network-Based Security – Flow Comparison





Comments or Questions?

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