

1. Record Nr.	UNINA9910484690603321
Titolo	Passive and active measurement : 22nd International Conference, PAM 2021, Virtual Event, March 29-April 1, 2021, proceedings // Oliver Hohlfeld, Andra Lutu, Dave Levin (editors)
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2021] ©2021
ISBN	3-030-72582-0
Descrizione fisica	1 online resource (576 pages)
Collana	Lecture Notes in Computer Science ; ; v.12671
Disciplina	004.6
Soggetti	Computer networks - Management
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Preface -- Organization -- Contents -- COVID-19 -- Video Conferencing and Flow-Rate Fairness: A First Look at Zoom and the Impact of Flow-Queuing AQM -- 1 Introduction -- 2 Background and Related Work -- 2.1 Congestion Control for Video Conferencing -- 3 Measurement Design -- 3.1 Preliminaries -- 3.2 Testbed Setup -- 3.3 Fairness Measurement Scenarios and Procedure -- 4 Zoom Inter-Protocol Fairness Results -- 4.1 General Observations on Zoom's Behavior -- 4.2 Competition at Tail-Drop Queues -- 4.3 Competition at CoDel Queues -- 4.4 Competition at FQ_CoDel Queues -- 5 Conclusion -- A QoE Impact of Flow-Queuing AQM -- A.1 User Study Design -- A.2 Results -- References -- Characterizing Service Provider Response to the COVID-19 Pandemic in the United States -- 1 Introduction -- 2 Related Work -- 3 Data -- 4 How Did Traffic Demands Change? -- 5 What Was the Effect on Performance? -- 5.1 How Performance Changed After Lockdown -- 5.2 Throughput-Latency Relationship -- 6 How Did Service Providers Respond? -- 6.1 Capacity Increases at Interconnect -- 6.2 Increased Advertised IP Address Space -- 7 Conclusion -- A Longitudinal Latency Evolution for 2018-2019 (Previous Year) -- B Throughput-Latency Relationship -- References -- A First Look at COVID-19 Domain Names: Origin and Implications -- 1 Introduction -- 2 Data -- 2.1 Collecting Cov19doms -- 2.2 Collecting Active Websites Using Cov19doms -- 3 Measurement Study -- 3.1 Number of New

Infections and Cov19doms Registrations -- 3.2 Understanding the Usage of Cov19doms -- 3.3 Malicious Activities Using Cov19doms -- 4 Discussion -- 4.1 Limitations -- 4.2 Detecting Malicious Cov19doms -- 4.3 Ethical Considerations -- 5 Related Work -- 6 Conclusion -- References -- Web Security -- Clairvoyance: Inferring Blocklist Use on the Internet -- 1 Introduction -- 2 Background -- 3 Methodology. 3.1 Technique Overview -- 3.2 Criteria for Reflectors -- 3.3 Sampling Blocklist IPs -- 3.4 Control Group -- 3.5 Ethical Considerations -- 4 Pilot Study Implementation -- 4.1 Reflector Selection -- 4.2 Choosing Blocklists and Sampling IPs -- 4.3 Measurement Setup -- 5 Pilot Study Overall Results -- 5.1 Reflectors Using Blocklists -- 5.2 Partial Blocking -- 6 Conclusion -- A Inference Technique Details -- A.1 Inference Criteria -- A.2 False Positive and False Negative Analysis -- References -- Our (in)Secure Web: Understanding Update Behavior of Websites and Its Impact on Security -- 1 Introduction -- 2 Background -- 2.1 Preliminaries -- 2.2 Web Technologies and Updating -- 2.3 Common Vulnerabilities and Exposures -- 3 Method -- 3.1 Dataset Preparation and Enrichment -- 3.2 Analyzing Updating Behavior and Security Implications -- 4 Results -- 4.1 Update Behavior on the Web -- 4.2 Security Impact of Not Updating -- 5 Limitations -- 6 Related Work -- 7 Discussion and Conclusion -- A Overview of the Top Identified CWEs -- B Average age of the 20 used software by website-ranking -- C Case Studies -- References -- Winding Path: Characterizing the Malicious Redirection in Squatting Domain Names -- 1 Introduction -- 2 Background -- 2.1 Domain Squatting Abuse -- 2.2 URL Redirection -- 3 Measurement Methodology -- 3.1 Measuring Squatting Domains -- 3.2 Crawling Strategy -- 4 Malicious Redirection Analysis -- 4.1 Benign Redirection vs. Malicious Redirection -- 4.2 Intermediary Sharing -- 4.3 Infrastructure Sharing -- 5 Limitation -- 6 Conclusion -- References -- Video Streaming -- An Empirical Measurement Study of Free Live Streaming Services -- 1 Introduction -- 2 Free Live Streaming -- 3 Measurement Methodology -- 3.1 Experimental Setup -- 3.2 Data Collection -- 4 Measurement Results -- 4.1 Network Quality of Service (QoS) Analysis. 4.2 Video Quality of Service (QoS) Analysis -- 4.3 QUIC -- 4.4 Privacy Analysis -- 5 Related Work -- 6 Conclusion -- References -- A Data-Driven Analysis and Tuning of a Live Hybrid CDN/V2V Video Distribution System -- 1 Introduction -- 2 State of the Art -- 3 Overall Channel Profiling -- 3.1 Data Set -- 3.2 Clients Profiling and V2V Efficiency -- 4 Detailed Analysis of Chunk Loss Rate (CLR) -- 5 CLR Mitigation Algorithm -- 6 Evaluation -- 6.1 Test-Bed Results -- 6.2 Results in the Wild -- 7 Conclusion and Future Work -- References -- Too Late for Playback: Estimation of Video Stream Quality in Rural and Urban Contexts -- 1 Introduction -- 2 Methodology and Datasets Overview -- 2.1 QoS and QoE Metrics -- 2.2 Measurement Suite -- 2.3 Description of Datasets -- 2.4 Video QoE Measurement Scalability Challenges -- 3 Inferring QoE Metrics for Video -- 3.1 Learning Problem -- 3.2 Learning Algorithm -- 3.3 Results -- 4 Related Work -- 5 Conclusion -- References -- TLS -- Measurement and Analysis of Automated Certificate Reissuance -- 1 Introduction -- 2 Background -- 2.1 Certificates -- 2.2 Let's Encrypt -- 2.3 Related Work -- 3 Methodology -- 3.1 Certificates -- 3.2 Let's Encrypt CAA Bug List -- 3.3 Defining Certificate Reissuances -- 4 Results -- 4.1 Automated Reissuance -- 4.2 Manual Reissuance -- 5 Concluding Discussion -- References -- Revocation Statuses on the Internet -- 1 Introduction -- 2 Revocation Protocols -- 3 Measurement Methodology -- 4 Characterization Results -- 4.1 High-Level Breakdown -- 4.2 Revocation Status Changes -- 4.3 Biases in the Revocation Sets -- 4.4

CRL-Based Analysis -- 5 Related Work -- 6 Conclusion -- References -- Measuring DNS over TLS from the Edge: Adoption, Reliability, and Response Times -- 1 Introduction -- 2 DoT Background: Adoption and Traffic Share -- 3 Methodology -- 4 Reliability -- 5 Response Times. 6 Related Work and Discussion -- 7 Limitations and Future Work -- 8 Conclusion -- References -- Staying Connected -- Long-Lasting Sequences of BGP Updates -- 1 Introduction -- 2 Related Work -- 3 Extracting Sequences from Time Series -- 4 One Year of BGP Sequences -- 5 Conclusions -- A The Discrete Wavelet Transform -- B The Collector Peers and their Locations -- References -- Inferring Cloud Interconnections: Validation, Geolocation, and Routing Behavior -- 1 Introduction -- 2 Background and Previous Work -- 3 Validating bdrmapIT With Azure Hostnames -- 3.1 Investigating as Operator Inference Errors -- 3.2 Fast and Straight Traceroute (FAST) Traceroute Probing -- 4 Learning About Clouds from Interconnections -- 4.1 GCP Inflates Traceroute Probe TTLs -- 4.2 Inferring How Clouds Reach Internet Networks -- 4.3 Geolocating Cloud Interconnections -- 5 Limitations -- 6 Conclusion -- A Recent GCP Traceroute Behavior -- References -- On the Resilience of Internet Infrastructures in Pacific Northwest to Earthquakes -- 1 Introduction -- 2 Background and Related Work -- 3 Design and Implementation of ShakeNet Framework -- 3.1 Overview of ShakeNet Framework -- 3.2 Datasets Used -- 3.3 Categorization of Risk Groups -- 3.4 Assessment of Shaking-Induced Damages to Internet Infrastructure -- 3.5 Mitigation of Infrastructure Risks -- 4 Impacts of Earthquake Shaking on Infrastructures in PNW -- 4.1 How Much Infrastructure is Susceptible to Earthquakes? -- 4.2 What are the Impacts of Infrastructure Outages on the Society? -- 4.3 How to Minimize the Impacts of Earthquakes on Internet Infrastructures? -- 5 Summary and Future Work -- A Appendices -- A.1 Contour of Expected PGA Values -- A.2 Miles of Fiber Affected Per Provider -- References -- DoS -- New Kids on the DRDoS Block: Characterizing Multiprotocol and Carpet Bombing Attacks -- 1 Introduction. 2 Related Work -- 3 MP-H, a Multiprotocol Honeygot -- 4 Data Analysis -- 4.1 Overview -- 4.2 Attack Intensity -- 4.3 Per-protocol Analyses -- 4.4 Victims -- 4.5 Carpet Bombing Attacks -- 5 Conclusion -- References -- DDoS Never Dies? An IXP Perspective on DDoS Amplification Attacks -- 1 Introduction -- 2 Data Sets and DDoS Classification -- 3 DDoS in the Wild -- 3.1 The State of Legacy DDoS Protocols -- 3.2 New Kids on the Block -- 3.3 Multi-protocol Attacks -- 3.4 Attack Packet Rates vs. Volume -- 4 Infrastructure Perspective -- 5 View on Targets -- 6 Honeygot Perspective -- 7 Conclusions -- References -- A Peek into the DNS Cookie Jar -- 1 Introduction -- 2 Background -- 3 Support for DNS Cookies -- 3.1 Server-Side Cookie Support -- 3.2 Client-Side Cookie Support in Recursive Resolvers -- 4 Server Cookie Analysis -- 4.1 Dynamic Cookies -- 4.2 Static Cookies -- 5 The State of Cookie Enforcement -- 5.1 Client Handling of Unexpected Server Behavior -- 5.2 Server Handling of Unexpected Client Behavior -- 6 Discussion -- 6.1 Cookie Benefits Today -- 6.2 Path Forward for Cookies -- 7 Ethical Considerations -- 8 Conclusion -- References -- Performance -- What You Need to Know About (Smart) Network Interface Cards -- 1 Introduction -- 2 Measurement Methodology -- 2.1 Experimental Setup -- 3 Analysis of Flow Tables -- 3.1 Hardware Classification Performance -- 3.2 Rule Operations Analysis -- 4 Related Work -- 5 Conclusions -- References -- Scouting the Path to a Million-Client Server -- 1 Introduction -- 2 Measurement Setup -- 3 Overall Stack Performance -- 4 Admission Control to the Stack -- 4.1 Packet Sizing -- 4.2 Backpressure -- 4.3 Batching Ingress Packets -- 5 Per-Packet Overhead -- 6 Related Work -- 7 Relevance of

Findings to Other Stacks -- 8 Conclusion -- A Linux Stack Overview --
B Parameter Configuration -- C Overall Stack Performance.
D FQ v.s. PFIFO.
