# BIBLIOGRAPHY

[1] A Global Name Service for a Highly Mobile Internetwork. UMass SCS Technical Report, 2013 and 2014. `https://web.cs.umass.edu/publication`.

[2] Akamai. `http://www.akamai.com/`.

[3] Alexa web information service. `http://www.alexa.com`.

[4] Amazon EC2. `http://aws.amazon.com/ec2/`.

[5] Cassandra. `http://cassandra.apache.org`.

[6] Cisco. Best Practices in Network Planning and Traffic Engineering. `http://www.nanog.org/meetings/nanog52/presentations/Sunday/maghbouleh-bestpractices-tutorial.pdf`.

[7] Geo-Replication Performance Gains with Microsoft SQL Server 2008 Running on Windows Server 2008. `http://technet.microsoft.com/en-us/library/dd263442(v=sql.100).aspx`.

[8] Mongo DB. `http://www.mongodb.org/`.

[9] msocket: System Support for Developing Seamlessly Mobile, Multipath, and Middlebox-Agnostic Applications. `http://sites.google.com/site/msockettech/home`.

[10] Twitter. `https://twitter.com/`.

[11] Abhigyan, Mishra, Aditya, Kumar, Vikas, and Venkataramani, Arun. Beyond MLU : An Application Centric Comparison of Traffic Engineering Schemes. In *UMASS Computer Science Technical Report* (UM-CS-2010-012).

[12] Abhigyan, Venkataramani, A, and Sitaraman, R. Distributing Content Simplifies ISP Traffic Engineering. *Technical Report*. `http://peoplecsumassedu/~abhigyan/NCDNpdf`.

[13] Abts, Dennis, Marty, Michael R., Wells, Philip M., Klausler, Peter, and Liu, Hong. Energy proportional datacenter networks. In *Proceedings of the 37th Annual International Symposium on Computer Architecture* (New York, NY, USA, 2010), ISCA '10, ACM, pp. 338–347.

[14] Agarwal, Sharad, Dunagan, John, Jain, Navendu, Saroiu, Stefan, Wolman, Alec, and Bhogan, Harbinder. Volley: automated data placement for geo-distributed cloud services. In *NSDI* (2010).

[15] Andersen, David, Balakrishnan, Hari, Kaashoek, Frans, and Morris, Robert. *Resilient overlay networks*, vol. 35. ACM, 2001.

[16] Andrews, M., Anta, A.F., Zhang, L., and Zhao, Wenbo. Routing for energy minimization in the speed scaling model. In *INFOCOM, 2010 Proceedings IEEE* (2010), pp. 1–9.

[17] Antoniades, D, Markatos, EP, and Dovrolis, C. One-Click Hosting Services: A File-Sharing Hideout. In *IMC* (2009).

[18] Apple. HTTP Live Streaming. `http://bitly/MgoUED`.

[19] Applegate, D, Archer, A, Gopalakrishnan, V, Lee, S, and Ramakrishnan, K K. Optimal content placement for a large-scale VoD system. In *Co-NEXT* (2010).

[20] Applegate, D, and Cohen, E. Making routing robust to changing traffic demands: algorithms and evaluation. *IEEE/ACM Trans Netw 14* (December 2006), 1193–1206.

[21] AT&T. Content Distribution, 2011. `http://bitly/Lefgj2`.

[22] Azar, Y, Cohen, E, Fiat, A, Kaplan, H, and Racke, H. Optimal oblivious routing in polynomial time. In *STOC* (2003).

[23] Barbir, A, Cain, Brad, Nair, Raj, and Spatscheck, Oliver. Known content network (cn) request-routing mechanisms. *Internet Engineering Task Force RFC 3568* (2003).

[24] Barroso, Luiz André, and Hölzle, Urs. The case for energy-proportional computing. *IEEE computer 40*, 12 (2007), 33–37.

[25] Beheshti, N, Ganjali, Y, Ghobadi, M, McKeown, N, and Salmon, G. Experimental study of router buffer sizing. In *IMC* (2007).

[26] Bhattacharjee, Samrat, and et al. Application-Layer Anycasting. In *IEEE INFOCOM* (1997).

[27] Bohrer, Pat, Elnozahy, ElmootazbellahN., Keller, Tom, Kistler, Michael, Lefurgy, Charles, McDowell, Chandler, and Rajamony, Ram. The case for power management in web servers. In *Power Aware Computing*, Robert Graybill and Rami Melhem, Eds., Series in Computer Science. Springer US, 2002, pp. 261–289.

[28] Brownlee, N., Claffy, K.C., and Nemeth, E. Dns measurements at a root server. In *GLOBECOM '01. IEEE* (2001).

[29] Carpathia. `http://www.carpathia.com/assets/files/carpathialoadbalancesheet.pdf`.

[30] Cast, Edge. `http://wwwedgecastcom/solutions/licensed-cdn/`.

[31] Cha, Meeyoung, Kwak, Haewoon, Rodriguez, Pablo, Ahn, Yong-Yeol, and Moon, Sue. I tube, you tube, everybody tubes: analyzing the world's largest user generated content video system. In *Proceedings of the 7th ACM SIG-COMM conference on Internet measurement* (New York, NY, USA, 2007), IMC '07, ACM, pp. 1–14.

[32] Chiaraviglio, Luca, Mellia, Marco, and Neri, Fabio. Minimizing isp network energy cost: formulation and solutions. *IEEE/ACM Trans. Netw. 20*, 2 (Apr. 2012), 463–476.

[33] Cisco. Visual Networking Index, 2011. `http://bitly/KXDUaX`.

[34] Cohen, B. BitTorrent Protocol. `http://bitly/KDhQV1`.

[35] Cole, RG, and Rosenbluth, JH. Voice over IP performance monitoring. In *SIGCOMM CCR* (2001).

[36] Corbett, James C., Dean, Jeffrey, Epstein, Michael, and et al. Spanner: Google's globally distributed database. *ACM Trans. Comput. Syst.* (2013).

[37] Cox, Russ, Muthitacharoen, Athicha, and Morris, Robert. Serving dns using a peer-to-peer lookup service. In *IPTPS* (2002).

[38] Davison, Brian D. A web caching primer. *Internet Computing, IEEE 5*, 4 (2001), 38–45.

[39] DeCandia, Giuseppe, Hastorun, Deniz, Jampani, Madan, Kakulapati, Gunavardhan, Lakshman, Avinash, Pilchin, Alex, Sivasubramanian, Swaminathan, Vosshall, Peter, and Vogels, Werner. Dynamo: Amazon's highly available key-value store. *SIGOPS Oper. Syst. Rev. 41*, 6 (Oct. 2007).

[40] Delivery, Squid: Optimising Web. Squid: Optimising Web Delivery. `http://www.squid-cache.org/`.

[41] Dilley, John, Maggs, Bruce M, Parikh, Jay, Prokop, Harald, Sitaraman, Ramesh K, and Weihl, William E. Globally Distributed Content Delivery. *IEEE Internet Computing 6*, 5 (2002), 50–58.

[42] DiPalantino, D, and Johari, R. Traffic Engineering vs Content Distribution: A Game Theoretic Perspective. In *INFOCOM* (2009).

[43] Dixon, Colin, Uppal, Hardeep, Brajkovic, Vjekoslav, Brandon, Dane, Anderson, Thomas, and Krishnamurthy, Arvind. Ettm: a scalable fault tolerant network manager. In *Proceedings of the 8th USENIX conference on Networked systems design and implementation* (Berkeley, CA, USA, 2011), NSDI'11, USENIX Association, pp. 7–7.

[44] DNSSEC. DNS Threats & Weaknesses of the Domain Name System, 2012. `http://www.dnssec.net/dns-threats.php`.

[45] Elwalid, A, Jin, C, Low, S, and Widjaja, I. MATE: MPLS adaptive traffic engineering. In *INFOCOM* (2001).

[46] Erman, Jeffrey, Gerber, Alexandre, Ramadrishnan, K. K., Sen, Subhabrata, and Spatscheck, Oliver. Over the top video: the gorilla in cellular networks. In *Proceedings of the 2011 ACM SIGCOMM conference on Internet measurement conference* (New York, NY, USA, 2011), IMC '11, ACM, pp. 127–136.

[47] Escriva, Robert, Wong, Bernard, and Sirer, Emin Gün. Hyperdex: a distributed, searchable key-value store. In *Proceedings of the ACM SIGCOMM 2012 conference on Applications, technologies, architectures, and protocols for computer communication* (New York, NY, USA, 2012), SIGCOMM '12, ACM, pp. 25–36.

[48] Feamster, Nick, Borkenhagen, Jay, and Rexford, Jennifer. Guidelines for interdomain traffic engineering. *SIGCOMM Comput. Commun. Rev. 33*, 5 (Oct. 2003), 19–30.

[49] Fortz, B, Rexford, J, and Thorup, M. Traffic engineering with traditional IP routing protocols. *Communications Magazine, IEEE 40*, 10 (2002), 118–124.

[50] Fortz, B, and Thorup, M. Internet traffic engineering by optimizing OSPF weights. In *INFOCOM* (2000).

[51] Fortz, B, and Thorup, M. Optimizing ospf/is-is weights in a changing world. *JSAC* (May 2002).

[52] Foundation, Open Networking. Open Networking Foundation. `https://www.opennetworking.org/`.

[53] Fraleigh, C, Moon, S, Lyles, B, Cotton, C, Khan, M, Moll, D, Rockell, R, Seely, T, and Diot, C. Packet-Level Traffic Measurements from the Sprint IP Backbone. In *IEEE Network* (2003).

[54] Frank, B, Poese, I, Smaragdakis, G, Uhlig, S, and Feldmann, A. Content-aware Traffic Engineering. *ArXiv e-prints* (2012).

[55] Frank, B, Poese, I, Smaragdakis, G, Uhlig, S, and Feldmann, A. Content-aware traffic engineering. In *SIGMETRICS* (2012).

[56] Freedman, Michael J., Lakshminarayanan, Karthik, and Mazires, David. Oasis: Anycast for any service, 2006.

[57] Gadde, Syam, Chase, Jeff, and Rabinovich, Michael. Web caching and content distribution: A view from the interior. *Computer Communications 24*, 2 (2001), 222–231.

[58] Gao, Peter Xiang, Curtis, Andrew R., Wong, Bernard, and Keshav, Srinivasan. It's not easy being green. In *Proceedings of the ACM SIGCOMM 2012 conference on Applications, technologies, architectures, and protocols for computer communication* (New York, NY, USA, 2012), SIGCOMM '12, ACM, pp. 211–222.

[59] Gill, P, Arlitt, M, Li, Z, and Mahanti, A. Youtube traffic characterization: a view from the edge. In *Proceedings of the 7th ACM SIGCOMM conference on Internet measurement* (New York, NY, USA, 2007), IMC '07, ACM, pp. 15–28.

[60] Guenter, B., Jain, N., and Williams, C. Managing cost, performance, and reliability tradeoffs for energy-aware server provisioning. In *INFOCOM, 2011 Proceedings IEEE* (2011), pp. 1332–1340.

[61] Gummadi, KP, Dunn, RJ., Saroiu, S, Gribble, SD, Levy, HM, and Zahorjan, J. Measurement, Modeling, and Analysis of a Peer-to-Peer File-Sharing Workload. In (2003).

[62] Gwertzman, James, and Seltzer, Margo. The case for geographical push caching. In *IEEE HotOS Workshop* (May 1995).

[63] Heller, Brandon, Seetharaman, Srini, Mahadevan, Priya, Yiakoumis, Yiannis, Sharma, Puneet, Banerjee, Sujata, and McKeown, Nick. Elastictree: saving energy in data center networks. In *Proceedings of the 7th USENIX conference on Networked systems design and implementation* (Berkeley, CA, USA, 2010), NSDI'10, USENIX Association, pp. 17–17.

[64] Hengartner, Moon, S, Mortier, R, and Diot, C. Detection and analysis of routing loops in packet traces. In *IMW* (2002).

[65] HP. The edge of bandwidth growth. `http://bitly/HwXtUO`.

[66] Huang, Cheng, Li, Jin, and Ross, Keith W. Can internet video-on-demand be profitable? In *Proceedings of the 2007 conference on Applications, technologies, architectures, and protocols for computer communications* (New York, NY, USA, 2007), SIGCOMM '07, ACM, pp. 133–144.

[67] IBM. ILOG CPLEX. `http://ibmco/KRuqhB`.

[68] Interface, Akamai NetSession. `http://www.akamai.com/client`.

[69] Jiang, W, Zhang-Shen, R, Rexford, J, and Chiang, M. Cooperative content distribution and traffic engineering in an ISP network. In *SIGMETRICS* (2009).

[70] Kandula, S, Katabi, D, Davie, B, and Charny, A. Walking the tightrope: responsive yet stable traffic engineering. In *SIGCOMM* (2005).

[71] Kwak, Haewoon, Lee, Changhyun, Park, Hosung, and Moon, Sue. What is twitter, a social network or a news media? In *WWW* (2010).

[72] Lamport, Leslie. The part-time parliament. *ACM Trans. Comput. Syst. 16*, 2 (May 1998), 133–169.

[73] Lamport, Leslie, Malkhi, Dahlia, and Zhou, Lidong. Vertical paxos and primary-backup replication. In *Proceedings of the 28th ACM Symposium on Principles of Distributed Computing* (2009), PODC '09.

[74] Level-3, 2012. `http://www.level3.com/`.

[75] Level3. Content Delivery Network, 2011. `http://bitly/LvsIDm`.

[76] Lin, M., Wierman, A., Andrew, L. L. H., and Thereska, E. Dynamic right-sizing for power-proportional data centers. *Networking, IEEE/ACM Transactions on* (2012).

[77] Liskov, Barbara, and Cowling, James. Viewstamped replication revisited. Tech. Rep. MIT CSAIL-TR-2012-021, 2012.

[78] Liu, Zhenhua, Lin, Minghong, Wierman, Adam, Low, Steven H., and Andrew, Lachlan L.H. Greening geographical load balancing. In *Proceedings of the ACM SIGMETRICS joint international conference on Measurement and modeling of computer systems* (New York, NY, USA, 2011), SIGMETRICS '11, ACM, pp. 233–244.

[79] Live, PP. `http://wwwpplivecom/`.

[80] Lu, Tan, Chen, Minghua, and Andrew, L.L.H. Simple and effective dynamic provisioning for power-proportional data centers. *Parallel and Distributed Systems, IEEE Transactions on 24*, 6 (2013), 1161–1171.

[81] Madhyastha, Harsha V., Isdal, Tomas, Piatek, Michael, Dixon, Colin, Anderson, Thomas, Krishnamurthy, Arvind, and Venkataramani, Arun. iplane: an information plane for distributed services. In *OSDI* (Berkeley, CA, USA, 2006), USENIX Association, pp. 367–380.

[82] Mathew, V., Sitaraman, R.K., and Shenoy, P. Energy-aware load balancing in content delivery networks. In *INFOCOM, 2012 Proceedings IEEE* (2012), pp. 954–962.

[83] Media, Streaming. Telco-CDN Whitepapers. `http://bitly/GUDrUZ`.

[84] Nedevschi, Sergiu, Popa, Lucian, Iannaccone, Gianluca, Ratnasamy, Sylvia, and Wetherall, David. Reducing network energy consumption via sleeping and rate-adaptation. In *Proceedings of the 5th USENIX Symposium on Networked Systems Design and Implementation* (Berkeley, CA, USA, 2008), NSDI'08, USENIX Association, pp. 323–336.

[85] Nielsen. Online Video Usage Up 45%. `http://bitly/MiXiPU`.

[86] Nygren, E, Sitaraman, R K, and Sun, J. The Akamai network: a platform for high-performance internet applications. *SIGOPS Oper Syst Rev* (August 2010).

[87] of the Internet Reports, Akamai State. `http://www.akamai.com/stateoftheinternet/`.

[88] OSPF, Cisco Configuring. `http://www.cisco.com/univercd/cc/td/doc/product/software/ios122/`.

[89] Papagiannaki, K, Moon, S, Fraleigh, C, Thiran, P, and Diot, C. Measurement and Analysis of Single-Hop Delay on an IP Backbone Network. In *IEEE JSAC* (2006).

[90] Pappas, V., Massey, D., Terzis, A., and Zhang, L. A comparative study of the dns design with dht-based alternatives. In *INFOCOM* (2006).

[91] Pappas, Vasileios, Xu, Zhiguo, Lu, Songwu, Massey, Daniel, Terzis, Andreas, and Zhang, Lixia. Impact of configuration errors on dns robustness. In *SIGCOMM* (2004).

[92] Patel, Parveen, Bansal, Deepak, Yuan, Lihua, Murthy, Ashwin, Greenberg, Albert, Maltz, David A., Kern, Randy, Kumar, Hemant, Zikos, Marios, Wu, Hongyu, Kim, Changhoon, and Karri, Naveen. Ananta: cloud scale load balancing. In *Proceedings of the ACM SIGCOMM 2013 conference on SIGCOMM* (New York, NY, USA, 2013), SIGCOMM '13, ACM, pp. 207–218.

[93] Peterson, L, Bavier, A, Fiuczynski, M, and MuirLy, S. Experiences building planetlab. In *OSDI* (2006).

[94] Project, TOTEM. `http://totem.info.ucl.ac.be/`.

[95] Qiu, Lili, Yang, Yang Richard, Zhang, Yin, and Shenker, Scott. On selfish routing in internet-like environments. *IEEE/ACM Trans. Netw. 14*, 4 (Aug. 2006), 725–738.

[96] Qureshi, Asfandyar, Weber, Rick, Balakrishnan, Hari, Guttag, John, and Maggs, Bruce. Cutting the Electric Bill for Internet-Scale Systems. In *ACM SIGCOMM* (Barcelona, Spain, August 2009).

[97] Rahul, Hariharan, Kasbekar, Mangesh, Sitaraman, Ramesh, and Berger, Arthur. Towards Realizing the Performance and Availability Benefits of a Global Overlay Network, 2006. `http://hdl.handle.net/1721.1/30580`.

[98] Ramasubramanian, Venugopalan, and Sirer, Emin G. The design and implementation of a next generation name service for the internet. In *SIGCOMM* (2004).

[99] Ramasubramanian, Venugopalan, and Sirer, Emin Gun. Beehive: O(1) lookup performance for power-law query distributions in peer-to-peer overlays. In *NSDI* (2004).

[100] Rao, Lei, Liu, Xue, Xie, Le, and Liu, Wenyu. Minimizing electricity cost: Optimization of distributed internet data centers in a multi-electricity-market environment. In *INFOCOM, 2010 Proceedings IEEE* (2010), pp. 1–9.

[101] Read, Jason. Comparison and analysis of managed dns providers, Aug 2012. Cloud Harmony Inc.

[102] Renzenbrink, Tessel. Data Centers Use 1.3% of World's Total Electricity. A Decline in growth, 2011. `http://www.techthefuture.com/energy/data-centers-use-1-3-of-worlds-total-electricity-a-decline-in-growth/`.

[103] Report, ATLAS Internet Observatory 2009 Annual. `http://www.nanog.org/meetings/nanog47/presentations/-Monday/Labovitz\_ObserveReport\_N47\_Mon.pdf`.

[104] Rexford, J. Route optimization in IP networks. In *Handbook of Optimization in Telecommunications, Springer Science + Business Media* (February,2006).

[105] RFC. 2616. `http://wwwietforg/rfc/rfc2616txt`.

[106] Roughgarden, Tim, and Tardos, Éva. How bad is selfish routing? *J. ACM 49*, 2 (Mar. 2002), 236–259.

[107] Saroiu, Stefan, Gummadi, Krishna P., Dunn, Richard J., Gribble, Steven D., and Levy, Henry M. An analysis of internet content delivery systems. *SIGOPS Oper. Syst. Rev. 36*, SI (Dec. 2002), 315–327.

[108] Savage, S, Anderson, T, Aggarwal, A, Becker, D, Cardwell, N, Collins, A, Hoffman, E, Snell, J, Vahdat, A, Voelker, G, and Zahorjan, J. Detour: Informed Internet routing and transport. In *IEEE MICRO* (1999).

[109] Sharma, Abhigyan, Venkataramani, A, and Sitaraman, R. Distributing content simplifies isp traffic engineering. In *SIGMETRICS* (2013).

[110] Study, IPOQUE Internet. `http://wwwipoquecom/resources/internet-studies/internet-study-2008_2009`.

[111] Su, AJ, Choffnes, DR, Kuzmanovic, A, and Bustamante, F. Drafting behind Akamai. In *SIGCOMM* (2006).

[112] Topology, Abilene. `http://bit.ly/Lf8k7a`.

[113] Vasić, Nedeljko, Bhurat, Prateek, Novaković, Dejan, Canini, Marco, Shekhar, Satyam, and Kostić, Dejan. Identifying and using energy-critical paths. In *Proceedings of the Seventh COnference on emerging Networking EXperiments and Technologies* (New York, NY, USA, 2011), CoNEXT '11, ACM, pp. 18:1–18:12.

[114] Verizon. HBO for FIOS Customers. `http://bitly/JQ2dn8`.

[115] Verizon. Velocix at Verizon, 2011. `http://bitly/LlqGn3`.

[116] Vu, T., Baid, A., Zhang, Y., Nguyen, T. D., Fukuyama, J., Martin, R. P., and Raychaudhuri, D. Dmap: A shared hosting scheme for dynamic identier to locator mappings in the global internet. In *Proceedings of IEEE ICDCS* (2012).

[117] Wang, H, Xie, H, Qiu, L, Yang, Y R, Zhang, Y, and Greenberg, A. COPE: Traffic Engineering in Dynamic Networks. In *SIGCOMM* (2006).

[118] Wendell, Patrick, Jiang, Joe Wenjie, Freedman, Michael J, , and Rexford, Jennifer. DONAR: Decentralized Server Selection for Cloud Services. In *SIGCOMM* (2010).

[119] Wessels, Duane. *Squid: the definitive guide*. O'Reilly, 2009.

[120] Williams, A, Arlitt, M, Williamson, C, and Barker, K. Web Workload Characterization: Ten Years Later. In *Web Content Delivery, Volume 2* (2005).

[121] Xie, H, Yang, Y R, Krishnamurthy, A, Liu, Y G, and Silberschatz, A. P4P: Provider Portal for Applications. In *SIGCOMM* (2008).

[122] Zhang, C, Liu, Y, Gong, W, Kurose, J, Moll, R, and Towsley, D. On optimal routing with multiple traffic matrices. In *INFOCOM* (2005).

[123] Zhang, Mingui, Yi, Cheng, Liu, Bin, and Zhang, Beichuan. Greente: Power-aware traffic engineering. In *Network Protocols (ICNP), 2010 18th IEEE International Conference on* (2010), pp. 21–30.