



At a Glance

ATG Conference Publications

Where could you go if there were no limits on your innovation?

Members of the Advanced Technology Group at NetApp have regularly published at top tier conferences including the papers listed here.

2014

S. Narayanamurthy, K. Muthyala and G. Makkar. WORMStore: A Specialized Object Store for Write-Once Read-Many Workloads. In Proceedings of the 22nd IEEE International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS' 14)

A. Kathpal and G. Yasa, Nakshatra: Towards running batch analytics on an archive. In Proceedings of the 22nd IEEE International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS' 14)

Y. Zhang, C. Dragga, A. Arpaci-Dusseau, and R. Arpaci-Dusseau. ViewBox: Integrating Local File Systems with Cloud Storage Services. In Proceedings of the 12th USENIX Conference on File and Storage Technologies (FAST'14)

M. Krishnan, N. Prakash, V. Lalitha, B. Sasidharan, P. Kumar, S. Narayanamurthy, R. Kumar, and S. Nandi. Evaluation of Codes with Inherent Double Replication for Hadoop. In Proceedings of the 6th USENIX Workshop on Hot Topics in Storage and File Systems (HotStorage'14)

D. Santry, and K. Voruganti. Violet: A Storage Stack for IOPS/Capacity Bifurcated Storage Environments. In Proceedings of the 2014 USENIX Annual Technical Conference (ATC'14)

V. Mathur, C. George, and J. Basak. Anode: Empirical Detection of Performance Problems in Storage Systems using Time-Series Analysis of Periodic Measurements. In Proceedings of the 30th International Conference of Massive Storage Systems and Technology (MSST'14)

2013

F. Xie, M. Conduct, and S. Shete. Estimating Duplication by Content-based Sampling. In Proceedings of the 2013 USENIX Annual Technical Conference (ATC'13)

T. Xu, J. Zhang, P. Huang, J. Zheng, T. Sheng, D. Yuan, Y. Zhou, and S. Pasupathy. Do Not Blame Users for Misconfigurations. In Proceedings of the 24th ACM Symposium on Operating Systems Principles 2013 (SOSP'13)

Hiep Nguyen, Zhiming Shen, Xiaohui Gu, Sethuraman Subbiah, John Wilkes. AGILE: Elastic Distributed Resource Scaling for Infrastructure-as-a-Service. In Proceedings of the 10th USENIX International Conference on Autonomic Computing (ICAC'13)

M. Mihailescu, G. Soundararajan, and C. Amza. Mixapart: Decoupled Analytics for Shared Storage Systems. In Proceedings of the 11th USENIX Conference on Files and Storage Technologies (FAST'13)

Y. Zhang, G. Soundararajan, M. W. Storer, S. Subbiah, A. Arpaci-Dusseau, and R. Arpaci-Dusseau. Warming up Storage-Level Caches with Bonfire. In Proceedings of the 11th USENIX Conference on Files and Storage Technologies (FAST'13)

R. Talwadker and K. Voruganti. Paragone: What's next in block I/O modeling. In Proceedings of the 29th International

Conference of Massive Storage Systems and Technology (MSST'13)

P. C. Nagesh and A. Kathpal. Rangoli: Space management in deduplication environments. Proceedings of the 6th International Systems and Storage Conference. (SYSTOR '13)

2012

J. Schindler. I/O characteristics of NoSQL Databases. In Proceedings of the VLDB Endowment, Volume 5, Aug. 2012.

I. F. Adams, B. A. Madden, J. C. Frank, M. W. Storer, E. L. Miller, and G. Harano. Usage Behavior of a Large-scale Scientific Archive. In Proceedings of the International Conference on High Performance Computing, Networking, Storage and Analysis (SC'12)

M. Li, S. Gaonkar, A.R. Butt, D. Kenchammana, and K. Voruganti. Cooperative Storage-Level De-Duplication for I/O Reduction in Virtualized Data Centers. In the proceedings of the 20th IEEE International Symposium on Modeling, Analysis & Simulation of Computer and Telecommunication Systems (MASCOTS '12)

A. Kathpal, M. Kulkarni, and A. Bakre. Analyzing Compute vs. Storage Tradeoff for Video-aware Storage Efficiency. In Proceedings of the 4th USENIX Workshop on Hot Topics in Storage and File Systems (HotStorage'12)

M. Mihailescu, G. Soundararajan, and C. Amza. Mixapart: Decoupled Analytics for Shared Storage Servers. In Proceedings of the 4th USENIX Workshop on Hot Topics in Storage and File Systems (HotStorage'12)

P. Pipada, A. Kundu, K.Gopinath, C. Bhattacharyya, S. Susarla, and P. Nagesh.

LoadIQ: Online Learning to Label Program Phases Using Storage Traces. In Proceedings of the 4th USENIX Workshop on Hot Topics in Storage and File Systems (HotStorage'12)

J. Lentini, S. Byan, L. Pabon, and A. Madan. Mercury: Host-side Flash Caching for the Datacenter. In Proceedings of the IEEE Conference on Mass Storage Systems and Technologies 2012 (MSST'12)

P. Sehgal, K. Voruganti, and R. Sundaram. SLO-aware Hybrid Store. In Proceedings of the IEEE Conference on Mass Storage Systems and Technologies 2012 (MSST'12)

K. Srinivasan, T. Bisson, G. Goodson, and K. Voruganti. iDedup: Latency-aware, Inline Data Deduplication for Primary Storage. In Proceedings of the 10th USENIX Conference on File and Storage Technologies 2012 (FAST'12)

2011

L. N. Bairavasundaram, G. Soundararajan, V. Mathur, K. Voruganti, and S. Kleiman. Italian for Beginners: The Next Steps for SLO-based Management. In Proceedings of the 3rd USENIX Workshop on Hot Topics in Storage and File Systems 2011 (HotStorage'11)

Y. Chen, K. Srinivasan, G. Goodson, and R. Katz. Design Implications for Enterprise Storage Systems via Multi-Dimensional Trace Analysis. In Proceedings of the 22nd ACM Symposium on Operating Systems Principles (SOSP'11)

J. Schindler, S. Shete, and K. Smith. Improving the Throughput of Small Disk Requests with Proximal I/O. In Proceedings of the 10th USENIX Conference on File and Storage Technologies (FAST'11)

Z. Yin, X. Ma, J. Zheng, Y. Zhou, L. N. Bairavasundaram, and S. Pasupathy. An Empirical Study on Configuration Errors in Commercial and Open Source Systems. In Proceedings of the 22nd ACM Symposium on Operating Systems Principles (SOSP'11)

Z. Yin, D. Yuan, Y. Zhou, S. Pasupathy, and L. Bairavasundaram. How do Fixes Become Bugs? – A Comprehensive Characteristic Study on Incorrect Fixes in Commercial and Open Source Operating Systems. In Proceedings of the ACM SIGSOFT Symposium on the Foundations of Software Engineering 2011 (FSE'11) *ACM SIGSOFT Distinguished Paper Award*

2010

P. Macko, M. Seltzer, and K. A. Smith. Tracking Back References in a Write-Anywhere File System. In Proceedings of the 9th USENIX Conference on File and Storage Technologies (FAST'10)

O. Ozmen, K. Salem, J. Schindler, and S. Daniel. Workload-aware Storage Layout for Database Systems. In Proceedings of the ACM Special Interest Group on Management of Data Conference 2010 (SIGMOD'10)

N. J. Yadwadkar, C. Bhattacharyya, K. Gopinath, T. Niranjana, and S. Susarla. Discovery of Application Workloads from Network File Traces. In Proceedings of the 9th USENIX Conference on File and Storage Technologies 2010 (FAST'10)

D. Yuan, H. Mai, W. Xiong, L. Tan, Y. Zhou, and S. Pasupathy. SherLog: Error Diagnosis by Connecting Clues from Runtime Logs. In Proceedings of the International Conference on Architecture Support for Programming Languages and Operating Systems 2010 (ASPLOS'10)

2009

V. Agrawal, C. Bhattacharyya, T. Niranjana, and S. Susarla. Prediction of Hard Drive Failures via Rule Discovery from Autosupport Data. In Proceedings of the International Conference of Machine Learning and Applications 2009 (ICMLA'09)

A. Batsakis, R. Burns, A. Kanevsky, J. Lentini, and T. Talpey. CA-NFS: A Congestion-aware Network File System. In Proceedings of the 8th USENIX Conference on File and Storage Technologies (FAST'09)

Best Paper Award

W. Jiang, C. Hu, S. Pasupathy, A. Kanevsky, Z. Li, and Y. Zhou. Understanding Customer Problem Troubleshooting from Storage System Logs. In Proceedings of the 8th USENIX Conference on File and Storage Technologies (FAST'09)

A. W. Leung, M. Shao, T. Bisson, S. Pasupathy, and E. L. Miller. Spyglass: Fast, Scalable, Metadata Search for Large-scale Storage Systems. In Proceedings of the 8th USENIX Conference on File and Storage Technologies (FAST'09)

A. Burtsev, K. Srinivasan, P. Radhakrishnan, L. N. Bairavasundaram, K. Voruganti, and G. R. Goodson. Fido: Fast Inter-domain Communication for

Enterprise Virtual Machines. In Proceedings of the USENIX Annual Technical Conference 2009 (ATC'09)

2008

L. N. Bairavasundaram, G. Goodson, B. Schroeder, A. C. Arpaci-Dusseau, and R. H. Arpaci-Dusseau. An Analysis of Data Corruption in the Storage Stack. In Proceedings of the 7th USENIX Conference on File and Storage Technologies (FAST'08)

Best Student Paper Award

A. Batsakis, R. Burns, A. Kanevsky, J. Lentini, and T. Talpey. AWOL: An Adaptive Write Optimizations Layer. In Proceedings of the 7th USENIX Conference on File and Storage Technologies (FAST'08)

M. W. Storer, K. M. Greenan, E. L. Miller, and K. Voruganti. Pergamum: Replacing Tape with Energy Efficient, Reliable, Disk-Based Archival Storage. In Proceedings of the 7th USENIX Conference on File and Storage Technologies (FAST'08)

A. Verma, K. Voruganti, R. Routray, and R. Jain. Sweeper: An Efficient Disaster Recovery Point Identification Mechanism. In Proceedings of the 7th USENIX Conference on File and Storage Technologies (FAST'08)

W. Jiang, C. Hu, A. Kanevsky, and Y. Zhou. Why Disks Fail. In Proceedings of the ODEMA Reliability Conference 2008

W. Jiang, C. Hu, Y. Zhou, and A. Kanevsky. Are Disks the Dominant Contributor for Storage Subsystem Failures? A Comprehensive Study of Storage Subsystem Failure Characteristics. In Proceedings of the 7th USENIX Conference on File and Storage Technologies (FAST'08)

A. Krioukov, L. N. Bairavasundaram, G. R. Goodson, K. Srinivasan, R. Thelen, A. C. Arpaci-Dusseau, and R. H. Arpaci-Dusseau. Parity Lost and Parity Regained. In Proceedings of the 7th USENIX Conference on File and Storage Technologies (FAST'08)

D. Kunkle and J. Schindler. A Load Balancing Framework for Clustered Storage Systems. In Proceedings of the 18th International Conference on High Performance Computing 2008 (HiPC'08)

For more information on the Advanced Technology Group at NetApp visit:

www.netapp.com/atg.