

# Andrew Gaul

Systems programmer interested in entrepreneurship and technical leadership opportunities in San Francisco. Background includes work in distributed computing, storage, and free software.

## Experience

OvrClk Software Engineer 2016

Once more unto the breach.

Bounce Storage Co-founder 2014 - 2015

Created a virtual object store designed for managing petabytes of data spanning disparate clouds and geographies. Led outbound efforts including pitching to investors, sourcing customer prospects, working with cloud vendors, and presenting at conferences. Implemented protocol translator comprised of an S3 frontend and an enhanced Apache jclouds backend.

Maginatics (acquired by EMC) Staff Engineer 2013 - 2014  
Senior Engineer 2011 - 2013

Founding engineer for MagFS 1.0-2.6, a cloud-based file system which evolved into EMC CloudBoost. Lead developer of object store-based data storage, SQL-based metadata storage, data deduplication, garbage collection, backups, and snapshots. Worked closely with the Apache jclouds community to improve performance, robustness, and compatibility across 15 different object stores. Addressed database concurrency, management, and space-efficiency issues, including contributions to upstream MySQL projects. Joined company before raising venture funding, recruited and mentored engineers, supervised contractors, represented company at conferences, authored patent applications, and interacted with customers, investors, and partners.

Riverbed Technology Member of Technical Staff 2006 - 2011

Storage engineer for SteelFusion 1.0, an iSCSI block cache with asynchronous write-back to primary storage. Contributed to core indexing structures, transactional persistence and recovery of data, and overall system performance. Took a proactive role in establishing internal dogfood setup, initial customer installs, and evangelizing failure-injection testing.

File system engineer for Atlas 1.0, a WAN-optimized storage appliance which evolved into NetApp AltaVault. Implemented algorithms for data deduplication and designed data structures for efficient indexing and storage of compressed data. Made novel improvements to data segmentation and garbage collection algorithms, increasing performance and space efficiency, particularly in the presence of snapshots. Provided key performance enhancements, realizing 2-10x speedups on various workloads via algorithmic improvements, assembly-level optimizations, and implementation tuning.

Device framework engineer for SteelHead 3.0-5.0, a network optimization appliance. Technical lead for implementing Python language bindings and modernizing command-line interface, supervising one junior engineer and one intern. Redesigned Berkeley DB-based statistics subsystem, realizing a 100x performance improvement, substantial space savings, and simplified garbage collection. Integrated SSL acceleration, the Proxy File Service, transparent CIFS cache warming, and encrypted configuration with various system services. Maintained and extended RHEL 4-based distribution across multiple products.

Tabernus (acquired by Blancco) Software Engineer 2004 - 2006

Lead engineer for the Tabernus E800 1.0, disk refurbishing hardware designed for high-throughput requalification. Features include hot-swapping, configurable tests including S.M.A.R.T., and network expandability. Designed and implemented Disk Purge 1.0-2.0, a bootable Linux CD for securely erasing storage devices. Added tape functionality, including SCSI commands and performance tests, to NorthstarADT 5.0, a Windows-based tool for designing and testing storage devices.

## Education

University of Texas at Austin BS Computer Sciences 1997 - 2002

## Miscellaneous

- author of Chaos HTTP Proxy, JDBC lint, Modernizer Maven Plugin, and S3Proxy
- Apache jclouds committer (2012 - present), PMC member (2013 - present), Vice President (2016 - present), and Google Summer of Code mentor (2014, 2017)
- free software contributions: compy, goofys, Guava, H2, innodb\_ruby, Percona InnoDB tools, s3fs, s3-tests, and Thrift
- received an honorable mention at the 2001 ACM International Collegiate Programming Contest