Guangkai Zhang

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Education

Xi'an Univesity of Architecture and Technology • Bachelor of Computer Information Management. 2008

Work Experience

Le Cloud (2016.6-present)
Senior Software Engineer

- Help develop and maintain the cloud storage system of LeCloud, mainly focused on Ceph development and storage performance tuning.

EMC Corp. (2012.6-2016.6)
Senior Software Engineer

- EMC VNX Rockies Release
  Project Description: Help deliver EMC Mid-Range storage product VNX. Mainly focused on storage virtualization subsystem MLU(Mapped LUN) which is similar to Linux Device Mapper. Features and functions including Advanced Snapshot, Auto Tiering, ODX(Offload Data Xfer), Storage Pool Space Reclaim, etc.
  Job Description: Investigate bugs found during system quality tests. Participate in discussion of feature development. Write HLD and functional spec.
  Tools: Distributed Lock Service, SCSI protocol, File System, Transaction Management, GCC, GDB, various storage test tools
- EMC Unity KittyHawk/Falcon Release
  Project Description: Help deliver EMC Entry level storage product Unity. Features include IMLR(In Memory Log Replay), PFDC(Persistent File Data Cache), etc.
  Job Description: Participate in discussion of feature development. Write automated functional test cases and unit test cases. Investigate bugs found during system quality tests.
  Tools: File System Log, File System Transaction Management, GCC, GDB

Tencent Technology - Beijing Branch (2011.7-2012.3)
Software Engineer

- Develop the QQ Account Protect module which protect users from web phishing.
- Analyze scanning log of the VDC(Virus Data Center) with python.
- Develop the QQ AntiVirus policy dispatch module.

BWSTOR - Beijing Branch (2008.7-2011.7)
Software Engineer

- BWFS SAN Windows Client performance tuning.
  Project Description: Assist the team leader to improve the I/O Performance of BWFS SAN Windows Client 5.0.
  Job Description: Investigate performance analyzing tools, benchmark testing tools. Do performance test and performance data analyzing.
  Tools: iometer, iozone.
- Port BWFS SAN Windows Client and VDisk to 64bit Windows.
  Project Description: Porting the BWFS SAN Windows Client file system driver and VDisk driver to 64bit Windows. The VDisk driver is a SCSI Miniport driver which provide functions as iSCSI initiator but using the NBD(Network Block Device) protocol.
  Job Description: Port drivers, fix bugs and do white box test.
  Tools: WinDDK, WinDbg.
- Snapshot component for the BWFS SAN Windows Client.
  Project Description: The snapshot component of BWFS SAN Windows Client contains two parts: a user mode component work with FalconStor's snapshot daemon and a driver component provides functions such as flushing, freezing and thawing the virtual disk device created by client's file system driver.
  Job Description: Develop the user mode component, do code review, fix bugs and do white box test.
  Tools: Platform SDK
- SCSI I/O feature for the BWFS SAN Windows Client.
  Project Description: Break the 4G maximum addressable LBA restriction in Windows XP so customers can export a single device which is larger than 2TB(block size 512 Bytes) to the Windows XP client.
  Job Description: Develop the user mode and kernel mode components, fix bugs and do white box test.
  Tools: Platform SDK, WinDDK, WinDbg.
- File system level flow control feature for the BWFS SAN Windows Client.
  Project Description: Provide the file system level flow control feature so our customers can make use of the network bandwidth reasonably when using iSCSI as the lower device.
  Job Description: Design, develop the user mode and kernel mode components, do code review, fix bugs and do white box test.
  Tools: Platform SDK, WinDDK, WinDbg, iometer.

- ACL feature for the BWFS SAN Windows Client.
  Project Description: Provide Windows ACL feature so our customers can do flexible permission management in the Windows way. We also make this feature compatible with Samba's NT ACL so the ACL can be modified via a Linux Samba export.
  Job Description: Investigate, design, develop the user/kernel mode components and do white box test.
  Tools: WinDDK, WinDbg, GDB, Samba source.
- Multipath component for the BWFS SAN Windows Client.
  Project Description: Provide multipath high availability feature on file system level.
  Job Description: Investigate the mechanism of Linux device mapper, develop sub component of the kernel mode pseudo device layer, do code review and do white box test.
  Tools: Platform SDK, WinDDK, WinDbg, Linux device mapper source.

BWSTOR - Beijing Branch (2008.3-2008.5)
Internship Software Engineer

- Develop the BWFS SAN Server Management System 5.0 with shell and perl
- Apply LTP(Linux Test Project) to BWFS SAN test system.

Skills

- Proficiency in software development in ASM, C, C++, Python.
- Excellent debugging skills with WinDbg.
- Familiarity with Windows NT kernel, Windows Driver Model, Windows File System Driver development, Windows Storage Stack.
- Knowledge in SCSI Miniport Driver and Disk Filter Driver.
- Experience in diagnosing performance problem with Windows Performance Toolkit.
- Technical support experience for foreign customers.
- Familiarity with GNU/Linux system management.

Honors and Awards

- Awarded the 2009 Excellent Project Award from BWSTOR.
- WDK Community BUG BASH 2010 Prize from osronline.