

Dwaipayan Lahiri

Summary

- A highly goal-oriented professional who specializes in designing infrastructure solutions and managing servers in the Enterprise.
- Driven to provide solutions and service far surpassing Industry performance standards.
- Solid ability to handle multiple priorities, develop and deliver cost/time-effective solutions and results.

Highlighted Skills

- UNIX, Linux administration (Solaris, Redhat, HP-UX, Sun Enterprise, Intel and IA-64 hardware).
- Sun/Oracle's M-series, T-series, x64 (X4800, X4270M2, X4600 etc), Sun F15K, StarFire Enterprise 10000, SunFire and Enterprise Mid-range, and entry-level servers.
- EMC CLARiiON CX4, CX3 line, HDS USP, XP12000; Brocade 24k, DCX SAN switches
- Veritas Foundation Suite/Volume Manager and Veritas Cluster Server 3.5. 4.x, 5.x, Veritas Storage Foundation for Oracle RAC
- Sun Cluster Server 3.x
- Programming (Perl, Shell programming, python)
- Web Administration (Apache w/tomcat, Netscape, iPlanet, IIS)
- Self-motivated individual with excellent communication, technical leadership and documentation skills.
- Detail-oriented and organized.
- Currently evaluating cloud computing platform (Amazon's EC2) as a viable solution for a portal (migrating from traditional web-hosting provider)

Professional Experience

U.S. Cellular® Corp, Schaumburg - IL
Sr. Systems Engineer (Infrastructure)
Nov 2007 – Present

Hardware: Sun x64-line of servers (X4600, X4200, v40z), Sun/Oracle SPARC line (M-series, T-series), EMC Clariion CX3, CX4 series midrange storage, EMC VMAX Tier-1 storage, Brocade DCX switches, Cisco Nexus 5000 series

OS: Solaris 11 Express, Solaris 10, Solaris 8/9, RHEL 4.x/5.x, VMWare ESX 3.5, VSphere 4, Solaris Virtualization (Clustered HA Containers)

Software: Oracle 10G/11G RAC, MySQL, Veritas SFRAC (4.x, 5.0), Sun Cluster 3.2/3.3, VCS 5.x, Sun Management Center, Halcyon NeuronCore, splunk

- Senior Systems Engineer with U.S. Cellular®'s Network Operations Center/Engineering division
 - Responsible for server hardware, Virtualization technology, SAN/Storage, Data Network Edge-switch configuration, OS and Cluster-ware support and deployment
 - Responsible for interaction with Vendors and VARs on relevant aspects of pricing, technology, support and architecture
 - Senior member of a team that provides 24x7 Support for over 500 servers (SPARC/Intel Solaris, VMWare ESX/Vsphere, Redhat Enterprise Linux, Windows 2000/2003/2008), close to 1 PB SAN storage (EMC Clariion CX3/4 series, VMAX) and Symantec/Veritas Netbackup infrastructure

- Responsible for identifying and resolving bottlenecks, performance impacts using various systems and application tools (eg: traditional unix tools, dtrace, strace etc)

Key Projects

- Design and roll out of High Performance DWH platform (Infrastructure) (~ \$2.5M project)
 - Involved in all aspects of Architecture of the Project, from specifications gathering, TCO analysis, prototyping to implementation phase of the project.
 - Used Oracle's X4800, X4270M2 Nehalem and Westmere based servers, EMC's VMAX storage array, Cisco Nexus 5010 10GBE switches, Solaris 10 u9, Oracle RAC 11g R2 Clustered Database software
- Design and roll out of Solaris Virtualization Farm (~ \$1.5M project)
 - Evaluate efficacy of cluster technologies (Symantec VCS vs Oracle Solaris Cluster) in a bake-off
 - Designed, prototyped and eventually implemented Solaris HA Container farm in clusters of Oracle's T5440 (Niagara T2+ based systems) using Solaris Cluster 3.2
- Evaluated, designed and implemented Enterprise Monitoring infrastructure using Sun Management Center, Halcyon NeuronCore, integrated into EMF framework (Netcool)
- Developed System Hardening solution in Perl (automates hardening per CIS Level 2 standards)
- Key member of two "Tiger Teams" on following initiatives:
 - Evaluating Resource capacity on Customer facing infrastructure, which required reverse-engineering legacy infrastructure (OS and down), documenting the designs, identifying resource-issues. This project required automating performance data collection and reporting (developed in combination of Perl and shells scripts)
 - Identifying performance bottlenecks in the billing platform (RHEL) and making recommendations for corrective action.
 - This initiative required working with a team across multiple platforms (LAN/WAN, Systems, Apps, Business users etc) and resulted in applying application level diagnostics (strace, lsof, etc) to establish the primary culprit in application bottleneck (which was the billing application).
 - The diagnosis led to further identifying WAN throughput as the ultimate cause.
 - After optimizing the TCP/IP network stack on the various components of the application (spread across 50+ servers in two geographically disparate locations), the severe performance impact was alleviated. This saved the company millions of dollars in lost revenue.
 - I was awarded a "Leader's Choice" award for this accomplishment.
- Using Solaris kernel debugger to identify and solve an epidemic system "hang" issue in the infrastructure (<http://realsysadmin.com/www/?p=24>)
- Engineered large-scale rollout of Linux infrastructure (RHEL) for new Billing Platform, using build automation using Kickstart, NIC bonding, hardening the OS, etc.

Chicago Board Options Exchange, Chicago - IL**Sr. Software Engineer (UNIX)****September 2007 – November 2007**

Hardware: Sun x64-line of servers (X4600, X4200, v40z), Fujitsu Prime Power series

OS: Solaris 10, Solaris 8/9

Software: Oracle 10G RAC, Veritas SFRAC (4.x, 5.0), Sun Cluster 3.1

- Senior Software Engineer with Distributed Support Group at CBOE
 - Responsible for OS-level and Cluster-ware support and deployment
 - Provide 24x7 Support for over 900 servers (mainly Sun/Solaris with some HP/HPUX, IBM/AIX servers in the mix)

Abbott Laboratories – Abbott Park, IL**Sr UNIX Infrastructure Architect**

(previously Consultant through LG Associates Inc)

April 2006 – September 2007

Hardware: Sun Fire 6900, V1280, V880/890, V480/490, V440, legacy hardware, HP's Integrity line of products (rx6600, rx3600, rx7640, rx8640), HDS 9980, QLogic, JNI HBAs.

OS: Solaris 8, 9, HPUX 11i v2 (11.23)

Software: Oracle, SAP Basis R3, Veritas Storage Foundation (std), Sun Cluster 2.x, Sun Cluster 3.1, VCS

- UNIX Architect with the Abbott Enterprise Services SAP UNIX Infrastructure team.
- Provide support in a 24x7 environment for the Enterprise SAP Environment.
- Proactive Capacity Planning (setting up Metrics reporting, analysis guidelines, system sizing and specifications gathering)
- Process improvement using Standardization of Design methodology.
- Redesigning Technology stack from Sun/Solaris/Sun Cluster to HP/HP-UX/VCS to host the next version of SAP Business Solutions to be implemented in the landscape.

Key Projects

- Design and roll out of SAP's BI and SCM (APO) modules for an Enterprise-wide implementation (~\$2M project)
 - Involved in all aspects of Architecture of the Project, from specifications gathering, TCO analysis to implementation phase of the project.

SARCOM (UNIX CONSULTANT ENGINEER)

GE Consumer Finance Account – Schaumburg, IL

Jan 2006 – April 2006

UNIX Consultant Engineer

Hardware: SunFire V1280, V440, 240, 210, legacy hardware, EMC Clariion, Qlogic, JNI, Emulex HBAs

OS: Solaris 8, 9, Linux (RHEL)

Software: Veritas Storage Foundation (Standard), Sybase, Informix, Oracle, Weblogic, Apache

- Was a Consultant UNIX Engineer at GECF – Managing a data center of about 50 Sun servers and consolidating resources as part of a vertical consolidation project – both server and application consolidation.
- Role involved server sizing, technology solution design, Customer interfacing.

Computer Sciences Corporation (Computer Scientist)

Aon Corp. Account – Glenview, IL

Jan 2005 – Jan 2006

Sr. UNIX Systems Engineer - Managed Computing Services (UNIX) and Design Engineering (North America)

Hardware: SunFire V890s, V880s, V490s, V480s, V440s and legacy hardware (Enterprise 6500 – 4500 series), EMC Symmetrix, Clarion, Emulex FC HBAs

OS: Solaris 9 (SPARC)

Software: Veritas Storage Foundation (Standard and HA suites), Veritas Volume Replicator, Veritas Global Cluster option, Perl, Shell

- Sr. UNIX Systems Engineer in support of CSC's Client Account (Aon Corp.) - supporting Aon's existing Datacenters in the US with an installed base of over 400 Sun, NCR and HP servers (running Solaris 8/9, legacy NCR UNIX and HP-UX 11i).
- As a Design Engineer (in the North America Design Engineering team) – facilitating acquisition,

testing and implementation of technology solutions (including Operating Systems, hardware, application software like Oracle 9i database servers, Websphere, LDAP, etc). Overall, designing and engineering solutions for CSC's Technology Migration project – migrating applications from Aon's existing data centers to CSC's data centers.

Important projects

- Develop and test a replicated DR environment to automate failovers across data centers for a key client application that used Sybase and Oracle DB backends using Veritas' Volume Replication software and Global Cluster Option. This involved setting up test servers in two datacenters (in the Midwest and the East Coast); preliminary data load (over half-terabyte of data) and configuring the VVR + GCO combination.
- Test and document viability of Secure Transport's Tumbleweed software Suite as an Enterprise Secure Data transfer mechanism.
- Developed and documented Cluster configuration guidelines along with concise Testing documentation – test conditions, procedures for Cluster Configuration certification.
- Key contributor to general UNIX Architecture for the Tech Migration project.
- Testing new hardware/changes in hardware specifications and certifying the same for deployment as part of designated Technology Stack.

Aon Corporation (Glenview, IL) / Computer Sciences Corporation (Consultant)**September 2003 – December 2004****Sr. UNIX Systems Engineer – Datacenter Operations**

Hardware: Enterprise hardware (Ultra-Enterprise servers – 6500, 5500, 4500, Midrange and Entry Level Sun servers, HP 4800, 8400, 8420 servers, and storage devices (EMC Symmetrix Series, Clariion series, Sun A1000/ D1000 Arrays, Emulex/JNI FC adapters, SCSI adapters).

OS: Various versions of SPARC-based Solaris (Solaris 9, 8, 7, 2.6, 2.5), HP-UX 10, 11.0 and 11i.

Software: Veritas Volume Manager, Solstice DiskSuite, Veritas Cluster services, Netscape/iPlanet web services, Oracle Databases, Lucent Vital QIP Enterprise IP Management, Shell scripting, Perl.

- UNIX Systems Engineer at Aon's (A Fortune 500 Insurance Company) largest datacenter in the US, located in Glenview IL.
- Member of the Datacenter UNIX Operations Team of five Engineers and One Lead Engineer managing over 400 servers. Supported platforms include E6500/5500/5000/4500, 880s, 440s, 280Rs and Entry-level Enterprise servers.
- General activities involve supporting all designated UNIX servers and Oracle DBAs, Web and application support teams in day-to-day operations; involved in regular pager-rotation as part of a highly efficient (24x7) support group.

Important Projects

- Global IP Infrastructure Management project using Lucent's Vital QIP software with Oracle 8.1.7 in the backend. Hardware/OS – Sun.
- Custom Jumpstart configurations (from "hands-free" Initial build to post-install patching of OS).
- Designed a Live Upgrade strategy for upgrade of EOL/downrev Solaris implementations within the datacenter.
- Designed and developed Enterprise UNIX monitoring software for the datacenter.
- Designed and developed a uniform password management system for the enterprise.

IT Resources Inc (Systems Administrator/Developer (Consultant))**May 2002— July 2003**

- Worked for IT Resources as a Consultant Systems Administrator.

Verizon (Tampa, FL) (Solaris Systems Administrator (Consultant))**Dec 2002—July 2003**

Hardware: Enterprise hardware (F15K, E10K, Sun Fire midrange and entry-level series, and storage devices (EMC Symmetrix Series, Sun D1000 Arrays, Emulex FC adapters, SCSI adapters).

OS: Various versions of SPARC-based Solaris (Solaris 9, 8, 7, 2.6, 2.5).

Software: Veritas Volume Manager, Solstice DiskSuite, Veritas Cluster services, Netscape/iPlanet web services, Shell scripting.

- System Administrator in the National UNIX Engineering Services of Verizon Data Services at the Data Center in Tampa, FL.
- Member of the National Sun Support Team that manages over 1500 Solaris Servers daily and provides 24x7 support. Supported platforms include E10Ks, F15Ks, 480s, 880s, 4800, 6800, E6500, E4500 and Enterprise servers.
- Building over 500 sun servers spanning 3 geographic locations (3 datacenters in Sacramento, New York and Tampa respectively) over a period of slightly over 2 months was the highlight of my work with Verizon. The entire System Build Cycle was streamlined and enhanced to automate most of the work that needed to be done (from Jumpstarting the OS to encapsulating rootdisk, mirroring, creating alternate disk groups). Network configuration (Normal, MultiPathing), EMC storage configuration (from server side), creation of non-OS disk groups and volumes on EMC environment was all automated. The general build time was brought down drastically without affecting the quality.

Important Projects

- Veritas Netbackup software upgrades (from V 3.x to 3.4.3) on all Netbackup media servers.
- Research and testing of Flash-based rapid-deployment mechanism.
- Custom Jumpstart configurations (from “hands-free” Initial build to post-install patching of OS).
- Upgrading E10K SSPs’ to OS version and patch-levels recommended by Sun.
- Key member of the team implementing a roll-out (Program U) of over 500 Sun Servers (280, 480, F15K hardware, Solaris 8).

IT Resources, Inc - Systems Administrator/Developer (Consultant)**May 2002—December 2002**

Hardware: Sun UltraSPARC, Intel Architecture.

Operating Systems: Solaris, Linux, and Windows 2000.

Database: Oracle 9i, MySQL.

Software: Perl (and various modules), gcc, make, binutils, ksh, sh, SQL, PL/SQL, HTML.

Services: ipchains, firewall, snort, ssh, ftp, apache, tomcat.

- Worked on in-house project developing a systems administration suite with various databases in the back-end and Perl interface.

Microsolve Consulting Inc. (Systems Administrator (Consultant))**May 2000—April 2002**

- Worked for an emerging IT Consulting firm as Systems Administrator for Solaris, Linux, and Windows. Work with two clients in architecting systems, web platforms and security. The projects are listed below.

**GE Capital AFS (UNIX Systems Administrator)
September 2000—March 2002**

Hardware: Sun Ultra Enterprise Servers and workstations, HP servers, Compaq IA servers.

Operating Systems: Sun Solaris 2.6,7, HP Unix, Windows NT.

Web Platform: Netscape Enterprise Server 3.63 with SSJS and Livewire applications, SSL.

Software: Solstice DiskSuite, Solstice AdminSuite, Enterprise Manager, Volume Manger, openSSH (v.1 – 3), openSSL, Perl (including various modules to implement SSL sockets, SMTP methods, database transactions, etc), HTML, gcc, make, awk, sed, ksh, sh, binutils among several others, BMC Patrol 3.4 (with UNIX, ISM, Windows NT KM's).

Services: sendmail, ftp, ssh, NFS, proxy servers (Netscape, Squid).

- Started as a consultant for 6 weeks to solve critical problems. Upon successful completion of assignments, continued with an extended assignment of over 15 months, till the business process got outsourced.

Important Projects

- Built secure Solaris servers; migrated the systems and web applications from GE IDS in Cincinnati to Exodus Communications in Illinois. The project involved redesigning the existing architecture to incorporate Load-Balancing mechanism which was implemented using F5 Big-IP load balancers. The Web Application was ported successfully on the new Architecture.
- Developed custom scripts monitoring various services (such as messaging, web server daemons, database availability).
- Developed build and rollout mechanisms to reduce deployment time of web applications.
- Developed “hands-free” maintenance routines (this drastically reduced human interaction based latencies and increased overall production time).
- BMC Patrol setup, customizing and administration.

**MBM Company Inc. (Systems Administrator – Consultant)
May 2000—September 2000**

Hardware: Sun ultra SPARC hardware, Dell, Gateway, Compaq hardware, NAS storage devices, routers, switches.

Operating Systems: Sun Solaris, Linux, Windows NT.

Web Platform: Internet Information Server, SSL, Site Sever.

Database: Oracle 8.0.5, MS SQL server 6.5.

Software: Solstice DiskSuite, Solstice AdminSuite, Volume Manger, openSSH, openSSL, Perl, Shells, gcc, make, awk, sed.

Services: CheckPoint Firewall, ssh, MS Proxy server, MS Exchange server 5.5, sendmail, dns, nfs.

- As systems administrator, built robust servers for the company's databases and web applications. Built web platform used for high traffic e-commerce application; designed and deployed email (and web access) solution. Worked closely with Oracle Apps and Database administrators, developers in data migration, storage and archival on NAS hardware, backup methodology and systems documentation.

Oct 1997 – April 2000

Worked as UNIX Systems administrator/ Network administrator in India. Details will be provided on request.

Education

Bachelor of Science, Engineering
Major: Instrumentation Technology
University of Mysore

IT Certifications & Training

Course/Certification	Year
Oracle Solaris Cluster 3.2/3.3 training by ExciteCertified	2011
VMWare ESX 3.5 Administration (VMWare Infrastructure 3)	2009
Oracle SQL Programming by Oracle	2009
EMC CLARiiON Host Integration and Management (CHIP) training by EMC	2009
Symantec Veritas Netbackup 6.5 training (Symantec)	2008
XP12000 Administration training by HP	2007
Sun Cluster Server 3.x Administration training by Sun Microsystems	2007
HP UNIX Administration and Performance Tuning training by HP	2007
SAN Foundation (Sun Microsystems)	2006
Networker Foundations (EMC)	2006
NAS Foundations (EMC)	2006
Clariion Foundations (EMC)	2006
VCS 3.5 (Veritas Cluster Server) administration training by Veritas.	2003
Sun Certified Systems Administrator (Solaris 7)	2002
Sun Certified Network Administrator (Solaris 8)	2002
Microsoft Certified Professional (Windows NT 4.0)	1999
Certified Novell Engineer (NetWare 4.11)	1997
Certified Novell Administrator	1996