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OBJECTIVES

- To find a position as an intermediate to senior Unix and/or Linux systems administrator, that benefits from my analytical and troubleshooting skills.
- To work for an organization that takes pride in providing high quality service to its community, and that values the expertise of its own staff.
- To participate in a cooperative environment where colleagues are working together towards a common goal.
- To be the best systems analyst that I can be, in a mutually beneficial association with an employer that makes valuable contributions to society.

WHY I SHOULD BE CONSIDERED FOR YOUR ORGANIZATION

- I'm an intelligent and hardworking person and I believe very strongly in doing a job completely and correctly.
- I have very strong analytical, troubleshooting, and problem-solving skills and am able to create clear and accurate documentation.
- I strive to gain a thorough understanding of systems and services for which I am responsible, which helps ensure that I am able to respond competently to problem reports and to the changing needs of my user community.
- I am a cooperative and enthusiastic member of any team that sets high standards for the quality of its work.
- I have a proven track record of well over a decade of working with commercial Unix and open-source Unix-like operating systems, system software, and networks.

SPECIFIC SKILLS

- Spoken languages: fluently bilingual in English and French, with strong writing, grammar, and linguistic skills in English.
- Excellent analytical skills with hardware, software, and networking protocols.
- Excellent knowledge of 802.11(a/b/g) wireless networking.
- Very strong knowledge of computer and network security.
- Excellent knowledge of Unix and Linux operating systems.
- Very strong knowledge of programming languages: C, Perl, shell scripting; plus some experience with C++, Python, PHP, and other scripting languages.
- Years of experience with network protocols and related server software (SMTP, NNTP, HTTP, FTP, POP, IMAP, DNS, DHCP, RADIUS).
- Strong knowledge of network management and monitoring software (Nagios, Cacti, NetDisco, MRTG, Flow-Tools, Net-SNMP).
- Strong knowledge of high-performance parallel computing cluster management and monitoring tools (SystemImager, Supermon, Pdsh, Distcc, Lustre).

My current position has me focusing primarily on system administration duties associated with a 130-node **high-performance parallel computer cluster** built on HP's XC system, which extends RedHat Enterprise Linux to the parallel computing environment. I also work with the other services and systems maintained by the Core Services group, which include **infrastructural systems** such as mail, DNS, databases, web servers, and authentication systems.

After the first four months in this position, during which I made a point to learn as much as I could about the XC system, its implementation, and the problems we had with it, I undertook to redeploy the system in order to **optimize the redundancy in the Lustre/HP-SFS filesystem**. This improved deployment demonstrated its benefit very shortly afterwards when a hardware failure occurred that would have resulted in significant data loss in the previous configuration.

I also have successfully managed to get the system to provide close to 100% availability, with much less frequent hardware downtime, by **improving system monitoring and reconfiguring monitoring tools** such as Nagios to provide better reporting. As a result of my efforts, we no longer have very frequent, day-long onsite visits from the system vendor's hardware technicians. Our **cluster nodes run much longer between failures**, and we're better equipped to deal with the failures ourselves.

In order to reduce repetitive tedious work, I strive to automate tasks as much as possible, but always with a means to monitor and in some cases override the automated behaviour. I have worked on some of the **automation of our account management** procedures, including the creation and deletion of accounts on the computing cluster, and user notification of account expiry. I have also contributed scripts that **automatically report on configuration changes** for console servers, and I have improved the **automated monitoring of UPSes**. In addition, I have fine-tuned our monitoring tools, such as Cacti and Nagios, with modular configuration where possible, to provide more thorough and more easily maintained monitoring of our infrastructure.

One of my current roles is to be a backup mail administrator, when our primary e-mail specialist is unavailable. In that capacity, in order to **reduce the amount of junk mail** users were receiving, I implemented a **greylisting mechanism** on our SMTP servers that has proven to be very effective.

I am the go-to analyst when it comes time to **evaluate system vulnerability reports pertaining to the Linux kernel or system library packages**. I examine as many documents as necessary to properly evaluate such reports in the context of our systems, locate and test (or occasionally develop) proofs of concepts to determine whether our systems are vulnerable, then **recommend patching priorities** for the reported vulnerabilities.

As a system administration position, my current job builds on skills and strengths that I have acquired in previous employment, including general programming skills, a strong analytical sense, hardware troubleshooting, as well as organizational skills.

In 2005, I accepted a new role as the administrator of the University's then fledgling wireless network service, which was quickly outgrowing its existing infrastructure. It had originally been deployed mostly haphazardly, with the result that while all of our few hundred access points were Cisco units, we had several different models in deployment, and we had different OSES in use (IOS and VxWorks), different versions of the OSES, and no central database of the location and existence of these access points.

In order to create a more consistent deployment that could easily be **centrally managed** with Cisco's WLSE appliance, I first had to get all our access points running the same OS and version, then integrate them into our central account management via a standard RADIUS service and authentication (LDAP) service, thereby **eliminating the need to manage separate user accounts** for our wireless networking service. I also **improved our deployment of DHCP service**, with redundancy and better management of address pools.

I **created monitoring tools** using a combination of the open-source Net-SNMP software package and Gnuplot, and adapted tools such as Nagios and NetDisco, normally used for monitoring and managing wired network components, to keep a virtual eye on the University's wireless networking service and to **report in the event of service failures**. These tools also helped us **balance the load**, by identifying where we might need to improve the service's capacity, or where we had equipment deployed that was underused.

Having accepted this new role with great enthusiasm, a few years later I felt that I had accomplished what I had set out to do, as I helped create a service that the University community can consistently count on for its wireless network access needs, whether in the classroom, in the library, or in labs and lounges.

I was initially hired for the summer of 1997 by Concordia University's IITS (Instructional and Information Technology Services, formerly Computing Services) Department, where I started as an assistant to the system administrators, **writing tools, reviewing and writing documentation**, and **answering user questions**. At the end of the summer I was given a full year contract and became a junior sysadmin, following which I became a permanent employee of the department, and eventually a senior member of the Unix Systems and Software Group. During this time I acquired skills in **programming using scripting languages**, improved my **C programming skills** and my ability to **troubleshoot and debug existing programs and systems**, and honed **documentation and organizational skills**. The team I was part of was a highly skilled group that strove to always provide excellent service and communication to its community, and I was very proud to be the newest member of that group.

In the years following, I **acquired progressively more responsibility** in that group, taking over major communications services such as the netnews service and the University's email service. As these services were by then struggling under the load of increasing misuse and incoming spam, I undertook to improve each service's performance. In the case of the netnews service, **deploying Cleanfeed into our INN installation**, and carefully managing which newsgroups we carried, kept the service reliable and **kept a very high signal-to-noise ratio**. For the mail service, I built upon my predecessor's implementations of MIMEDefang and SpamAssassin to **reduce the volume of incoming junk mail** for our users, and **designed and implemented multiple redundancy for SMTP and DNS services**. These systems are still in use and continue to provide very reliable service for the University community.

I was the system administrator for systems running critical databases and applications, such as the University's financial information system, its advancement and alumni system, its library information and circulation system, and its main "public" access computer system. I continued to improve my knowledge of **computer and network security** issues, and created scripts and programs to help **monitor system log files**, helping us maintain control of the security of computer systems. When it was time for me to move on to the wireless networking position described above, I **trained colleagues** to take over the systems and services that I would leave behind.

Non-Destructive Testing Technician

DNL Technologies, Montréal, Canada
(formerly Monac International, Winnipeg,
Canada)
1993 – 1997

DNL Technologies was a small engineering company specializing in the non-destructive testing of steel structures, where I **designed and assembled data-acquisition computers** based on the Zilog Z-80 microprocessor. I also acquired training and became the company's **specialist in the application of strain-gauge technology**, and **designed and created some of its printed circuit boards**.

In 1995 I designed, implemented and managed a small Windows-95 peer-to-peer network with file and printer sharing. At the time, this was a noteworthy achievement for such a small company. I also **wrote data collection and monitoring software**, using a combination of C and assembly language, which I'm proud to say was included in a package sold to and used by the New York City Department of Transportation.

Sound and Lighting Technician

various production companies
Winnipeg, Canada
1986 – 1993

Starting while I was still in high school, I worked as an electronics specialist in the entertainment industry, where I **operated and serviced lighting and sound equipment, as well as musical instruments**. During those years I was called upon to repair all manner of devices, in the interest of ensuring that a given performance not only happened, but happened on time: band-house plumbing, the starter in a converted bus, lighting controller consoles minutes before showtime, a diesel-powered electrical generator on a flatbed truck en route to a parade, monitor speakers overheating in the

hot sun, mixing desks, microphones, guitars, amplifiers, drums, synthesizers; the list is extensive. The notion that “the show must go on” may be cliché, but it is an excellent measure of work ethic, competence, and dedication to the job. Indeed, always **when I was on the job, the show did go on.**

VOLUNTEER
WORK

My first experience as a Unix system administrator was gained on a volunteer basis, **administering a DEC Ultrix system** for the Concordia University Computer Users’ Group. Through active participation in the `concordia.dept.comp-services.help` (now `concordia.dept.iits.help`) newsgroup, where I **answered computer-related questions from fellow students**, I attracted the attention of the Computing Services department’s Unix Systems and Software Group, which I would soon join.

Over the past fifteen-plus years, I have made some contributions to different open-source software projects. For example, I contributed a patch to make it possible for the **slrn newsreader’s local pool feature to be usable on a multi-user system**, by appropriate use of standard Unix file and directory permissions. I also was an active contributor to the Wu-FTPd server software in the last year or two of its popularity, having contributed patches that **made this ftp server easier to configure securely by default.**

ADDITIONAL
HISTORY

Even as a small child I was fascinated by machinery and technology. After a somewhat shaky start as a youngster taking apart household appliances to understand how they work, I **graduated with honours** in 1988 from Winnipeg’s Technical Vocational High School, specializing in electronics, and I received the **“highest achievement” award from the electronics department.**

PERSONAL
INTERESTS AND
HOBBIES

Computers and electronics are not only career paths but also hobbies for me, and in my spare time I taught myself C programming, as well as assembly-language programming for the Intel 80x86 and Zilog Z-80 microprocessors. I began experimenting with using the Unix operating system late in 1995, and very soon thereafter switched to using Linux full-time on my home computer, which has since grown into a small network of computers, all running Linux. These systems provide mail service, web service, NAT, and DNS service for a small number of personal domains. I also have a closed-circuit television system that supplements the home security system, and a dedicated music recording workstation, all implemented with open-source software.

One of my strongest interests is troubleshooting and repairing electronic audio and musical equipment. I buy such equipment in non-functional condition, and take great pride in successfully making it work. I’m also an amateur musician (I play guitar) and recording engineer, and I play ice hockey (and manage my team) in an adult recreational league. I regularly attend guitar and hockey workshops and clinics to improve my skills and to share in the joy of learning.