

Darren T. Boss

INFRASTRUCTURE ENGINEER · DEVOPS

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Education

University of Manitoba

Winnipeg, Manitoba, Canada

B.Sc., COMPUTER SCIENCE

1999

- Focus on Artificial Intelligence and Machine Learning.

Skills

DevOps Ansible, YAML, JSON, Docker, LXC

Sysadmin OpenStack, RHEL/CentOS, Ubuntu/Debian, Arch, Nagios

Programming Python, C/C++, JAVA, Perl, Lua

Web Django with Python, Ruby on Rails

Training Software Carpentry Certified Instructor

Experience

Duke Center for Genomic and Computational Biology - <http://genome.duke.edu>

Duke University

SENIOR SYSTEMS ADMINISTRATOR & INFRASTRUCTURE ENGINEER

2014 - present

- Administrated 1.5 Petabytes of NetApp FAS and E-Series storage.
- Administrated and advised researchers and graduate students on using our 3744 core HPC cluster.
- Tuned hardware and GPFS software for better performance.
- Transitioned center from using VMware to user controlled OpenStack deployment of research virtual machines.
- Integrated Ansible into manually deployed systems the previous staff had deployed by hand.
- Taught intro HPC in GCB Academy workshops.
- Specification and installation of HPC expansion.

CyVerse (formerly iPlant Collaborative)

University of Arizona

SENIOR SYSTEMS ADMINISTRATOR

2013 - 2014

- Deployed new OpenStack installation at Texas Advanced Computing Center.
- Maintained existing OpenStack installation at the University of Arizona.
- Responsible for software upgrades and monitoring of iRODS based Data Store.

Ecology and Evolutionary Biology, Sullivan Lab

University of Arizona

SENIOR SYSTEMS PROGRAMMER

2013

- Administration of shared HPC cluster.
- Installation of genomics applications on the cluster.
- Porting of lab developed pipelines to run within the iPlant/CyVerse infrastructure.

Ecology and Evolutionary Biology, Sanderson Lab

University of Arizona

SENIOR SYSTEMS PROGRAMMER

2007 - 2013

- Installation and administration of 288 core HPC cluster for the lab.
- Installation and configuration of 9 panel visualization wall.
- Programmed new and parallelized existing portions of the computing pipeline for a large scale phyloinformatics project in Perl.

<http://www.fieldmuseum.org/> - Zoology

Chicago, IL

BIOINFORMATICIST

2009 - 2011

- Administered the museum's HPC cluster.
- Developed a Ruby on Rails application for data collection on the Emerging Pathogens Project.

Academic Information and Communication Technologies

University of Alberta

SYSTEM ADMINISTRATOR

2005 - 2007

- System administrator for several departmental and research projects running a mixture of Solaris, AIX and Linux operating systems.
- Secondary contact for many critical Oracle instances.
- Consulted on and configured Linux based HPC clusters.

Folkways Alive!

University of Alberta

SYSTEM ADMINISTRATOR

2005

- Assisted with system and network administration during project start up.
- Installation and support for Linux servers, Sun Ray thin clients, OpenBSD firewalls, Cisco wireless and HP ProCurve Gigabit network.

Text Analysis Portal for Research

University of Alberta

SOFTWARE DEVELOPER/SYSTEM ADMINISTRATOR

2003 - 2005

- Assisted in drafting server RFP and vendor selection during initial hardware purchase.
- System administration for Linux and Solaris servers.
- Implemented incremental network backup scripts utilizing open source software.
- Ongoing software development and consultation with research projects.

Bruce Rannala Research Group

University of Alberta

SYSTEM ADMINISTRATOR

2002 - 2003

- Installation and administration of 36 CPU Linux HPC cluster.
- Managed network, firewall, file and print services for lab.

GE Fanuc

Edmonton, Alberta

SOFTWARE DEVELOPER

2001 - 2002

- Team member developing Synergy, a framework of components, tools and processes to enable rapid development and deployment of web-based manufacturing execution system solutions.
- Development done using a number of J2EE technologies including XML, XSLT, SOAP, Java Applets, JSP and Servlets.

System and Technology Services, Department of Education, Training and Youth

Winnipeg, Manitoba

PROGRAMMER/ANALYST

1999 - 2001

- Programmer on a J2EE web-based application for collecting and processing student loan applications for Manitoba Student Aid.
- Implemented version control software for all software development projects.

Extracurricular Activity

Splat Space - Maker Space

Durham, NC

BOARD MEMBER

2011 - 2015

- Board member for three consecutive years with the roles of treasurer and secretary.
- Helped the space acquire non-profit 501(c)(3) status.
- Volunteered at many maker faires and museums.
- Co-taught a class on Arduino for middle school aged students at a local library.
- Website system administrator.

Edmonton Unix User Group

Edmonton, AB

BOARD MEMBER

2003 - 2007

- Organized speakers for presentations at meetings.
- Presented on several topics including open source VoIP PBX software, system monitoring using Nagios and LDAP/Kerberos.
- Website system administrator.

Presentation

iRODS User Conference

University College London

PRESENTER

Sep. 2014

- Presented on iPlant's usage of iRODS for the research Data Store.

Edmonton Unix User Group

Edmonton, Alberta

PRESENTER

Apr. 2006

- Presented on setup and usage of the open source PBX software Asterisk.

Campus Computing 2005

Edmonton, Alberta

PRESENTER

Jun. 2005

- Presented on using Apple's Open Directory software in a mixed client environment.

Edmonton Unix User Group

Edmonton, Alberta

PRESENTER

Feb. 2005

- Nagios Host and Service Monitor.

Edmonton Unix User Group

PRESENTER

- Soekris and Embedded Linux/BSD.

Edmonton, Alberta

Jan. 2004

Edmonton Unix User Group

PRESENTER

- Introduction to LDAP and Single Sign-On.

Edmonton, Alberta

Oct. 2003

Teaching

GCB Academy - Introduction to Scientific Computing for Genomics

INSTRUCTOR

- Staging jobs and data for HPC.

Duke University, Durham, NC

Mar. 2016

GCB Academy - Introduction to Scientific Computing for Genomics

INSTRUCTOR

- Staging jobs and data for HPC.

Duke University, Durham, NC

Oct. 2015

GCB Academy - Introduction to Scientific Computing for Genomics

INSTRUCTOR

- Staging jobs and data for HPC.

Duke University, Durham, NC

Feb. 2015

Software Carpentry Bootcamp

INSTRUCTOR

- Python and version control with Git.

North Carolina State, Raleigh, NC

Jan. 2015

Data Carpentry Bootcamp

HELPER

- Was a helper at the inaugural Data Carpentry bootcamp at the National Evolutionary Synthesis Center.

Duke University, Durham, NC

May. 2014

Software Carpentry Teacher Training

TEACHER TRAINING

- Completed Software Carpentry instructor training course.

Mozilla, Toronto, ON

Apr. 2014

Carolina Farm Stewardship Sustainable Agriculture Conference

WORKSHOP FACILITATOR

- Co-presented at the farmhack workshop on microcontrollers and other electronics useful in automation projects.

Durham, NC

Nov. 2013

Software Carpentry Bootcamp

INSTRUCTOR

- Taught section on Python.

University of Kansas, Lawrence, KS

Aug. 2013

Software Carpentry Bootcamp

HELPER

- Helper at the iPlant sponsored Software Carpentry workshop.

University of Arizona, Tucson, AZ

Apr. 2013