Contact

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Top Skills

Electrical Engineering
Bash
Linux

Languages

Italian

Certifications

Convolutional Neural Networks
Machine Learning Foundations: A Case Study Approach
Neural Networks and Deep Learning
Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization
Deep Learning Specialization

Tony DelSorbo

Systems Engineer - Researching Artificial Intelligence and other Breaking Technologies
Dayton Metropolitan Area

Summary

Over 28 years progressive and extensive project management, IT, supervisory, computer, software, and electrical engineering experience, with over 12 years in heterogeneous High Performance Computing environments.

Specialties: Project Management, System Architecture, System Administration, Parallel Progamming, Strategic planning, Customer Relations

Experience

GDIT

Systems Engineer Expert/Technical Project Manager
July 2018 - December 2021 (3 years 6 months)
Dayton, Ohio, United States

• Focused on leading a subset of the Gov't/Contractor technology team in making progress toward implementation of a globus solution across data transfers systems
• Worked with SchedMD to identify areas of improvements and to bring 5 specific Slurm improvements to realization in their Slurm product.
• Evaluated and led team discussions on docker and singularity container technologies in preparation for implementing these technologies in the customer's environment.
• Provided guidance to the Cloud Project Manager and direct support to our technology team for the implementation of HPC using Cloud systems.
• Using the knowledge and expertise obtained while managing the Globus Project team, led the team in the implementation of a 2-factor authentication capability by using Oauth2, MyProxy and the customer’s existing RSA services. This was critical to provide a secure login capability for the customer’s Cloud service offering.
• Provided subject matter expertise in the development of the RFP for the customer’s Cloud Services Offering. Continued to provide expertise in the proposal evaluation.

• Interviewed, evaluated and provided recommendations on several Cloud Project Lead candidates leading to the eventual hire of the right candidate. The project has been a tremendous success as a result.
• Implemented highly available Slurm batch systems server infrastructure with a shared RAID storage device using Corosync/Pacemaker, systemd and slurm's built-in failover mechanisms.

General Dynamics Information Technology
7 years

Senior HPC Systems Analyst at CSRA
January 2017 - December 2021 (5 years)
Dayton OH, Fairmont WV.

• Subject matter expert of proposal team selected for an RFP response to provide multi-year support and management of customer's datacenters distributed across the country. The proposal included identifying and justifying the replacement of their current workload management system as well as identifying a replacement HPC system for at least one site. This latter effort included writing RFPs to be submitted to various vendors, evaluating vendor proposals and selecting winning proposal. The result led to winning the datacenter support proposal.
• Integration team member responsible for integrating and managing the new system as it arrives.

Senior HPC Systems Team Lead/Engineer
January 2015 - December 2021 (7 years)
Dayton OH, Fairmont WV.

• Managed daily operation, configuration, and maintenance of the remotely located 2 PB system.
• Provided advanced troubleshooting and analysis support for issues that are not resolvable at lower levels of support. Specific areas of support include Moab workload manager, Torque resource manager, Lustre file systems, and InfiniBand interconnects.
• Developed project plans and coordination for the monthly system maintenance activities. The activity preparation work includes identifying maintenance activities, developing plans for the maintenance period, developing and executing test plans prior to the maintenance period and addressing any issues encountered. During the maintenance periods, provided coordination of team activities and execution of tasks, including conducting extensive regression tests prior to returning system to operational status.

Senior HPC Systems Architect/Engineer
June 2017 - October 2021 (4 years 5 months)
Dayton, Ohio, United States

• Subject matter expert of proposal team selected for an RFP response to provide multi-year support and management of customer's datacenters distributed across the country. The proposal included identifying and justifying the replacement of their current workload management system as well as identifying a replacement HPC system for at least one site. This latter effort included writing RFPs to be submitted to various vendors, evaluating vendor proposals and selecting winning proposal. The result led to winning the datacenter support proposal.
• Integration team member responsible for integrating and managing the new system as it arrives.

Principle Systems Engineer/Project Manager
January 2018 - July 2019 (1 year 7 months)
Dayton, Ohio, United States

• Led a team of systems engineers to plan and integrate the new Slurm workload management system across four geographically dispersed datacenters. Plan included installing, testing, developing metrics collection tools, installing databases, developing user training, acceptance testing documents and conducting integration testing. Brought all four sites into production within nine months.
• Developed python tools to wrangle data via queries to multiple sources including LDAP, system files and csv files to produce and load workload manager associations (project-user-cluster) into the database.
• Developed python tools to extract accounting data from Slurm database and produce system, project or user centric reports.

CSC
16 years 4 months

Senior HPC Systems Analyst
August 2011 - September 2015 (4 years 2 months)
Fairmont, OH

Managed 27K+ cores SGI ICE 8400EX Hypercube HPC system. Primarily involved in enhancing system performance, identifying, troubleshooting and solving system issues, solving customer system issues, developing, managing and performing periodic maintenance, researching and providing recommendations to enhance the user experience. Maintained and collected system metrics for optimal performance of Lustre File systems. Also

responsible for implementing and maintaining the workload management system using Moab, Torque and MAM to support nearly 1000 users.

Senior HPC Systems Architect/Engineer
June 2013 - March 2015 (1 year 10 months)
Dayton, Ohio, Fairmont, WV

• Key member of selection team employed to write RFP, evaluate proposals and select a system to provide 2PF computing performance equally split between conventional CPUs and Fine Grained Architectures (i.e. Accelerators: GPUs or MICs).
• Led integration effort of 2 PetaFlop high performance computing and storage systems. Activities included coordinating with vendor architects to ensure system and customer requirements are met; coordinating and allocating resources; installing and configuring operating systems (RedHat 5,6, CentOS) using xCAT, network systems, batch systems (Moab/torque), job accounting systems, and metrics collection systems; developing system diagrams; developing installation plans, test and acceptance plans, and configuration documentation; verifying installation, and conducting acceptance tests;

Storage Lifecycle Management (SLM) Technical Project Manager
September 2009 - July 2014 (4 years 11 months)

As project manager, led a team in a Software Development and implementation effort for the DoD High Performance Computing Modernization Program (HPCMP) Storage Lifecycle Management (SLM) effort. Led the project with the team of contractors and group of 30+ DoD representatives through Preliminary and Detailed Design Phases to adapt the Storage Lifecycle Manager COTS software solution to the HPCMP operational and secure environment. Other major responsibilities included developing schedules, project plans, acceptance test plans, conducting tests and developing system documentation.

Systems Source Selection and Integration Project Manager
December 2010 - March 2012 (1 year 4 months)
Fairmont, WV

* Provided consultation services as a key member of the procurement technical evaluation team that selected the below system by evaluating technical proposals from various vendors.
* Lead a team of professionals in the integration of an enhanced hypercube cluster with 27000+ cores. Responsible for developing Installation, Configuration, Operations & Maintenance, and Acceptance Test Plans.

HPC Architect and Project Manager
April 2007 - September 2009 (2 years 6 months)
West Chester, OH

• Architected and integrated large, high performance computing systems for consumer goods product manufacturer and another system for a leading industrial aviation power plant customer resulting in the replacement of four aging HPC systems with one state-of -the-practice cluster system.
• Solicited requirements from customer and current support staff. Developed vision of architecture for the customer and explained new approach that addresses their “pain points;” developed RFPs, solicited proposals, analyzed proposals and selected winning bidders; Designed, developed, and implemented project plans for the implementation of these systems.
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HPC Advanced Technology Manager
March 2006 - July 2007 (1 year 5 months)
Wright Patterson AFB OH

Manager of a team of researchers serving the Aeronautical Systems Center Major Shared Resource Center (ASC MSRC) to lead in the exploration and exploitation of new IT technologies for high performance computing (HPC) systems. Manage projects, review and approve project plans to analyze technologies, evaluate products. Developed strategies, vision, roadmaps and plans to advance the state of technology at the ASC MSRC; Provided direction and support for IT solutions; Conducted research, executed benchmarks, and provided subject matter expertise in the areas of system integration, data center upgrades (space, power and cooling), HPC systems, servers, networks, and storage systems; evaluated and provided HPC technology recommendations leading to the enhancement of mission-critical business operations; communicated project milestones, status, and resource allocation to executive team, department leads, support staff, and end users.

HPC/High Performance Storage System Project Manager
September 2004 - January 2007 (2 years 5 months)
USDA - Various locations

• Served as project manager and worked with vendors to architect and implement a storage infrastructure system that is used to store hundreds of terabytes of agricultural aerial photography data; Identified requirements, evaluated technologies, provided cost benefit analyses and recommendations for the final solution. Executed the project plan to migrate data from the customer’s old tape library system to the new library system containing over 10,000 tapes.

• Identified requirements, evaluated technologies, provided cost benefit analyses and recommendations for the upgrade and relocation of storage systems from one data center to another.
• Led and provided consultation service to a cadre of storage administrators and managers at five geographically separate USDA sites throughout the country.
• Served as technical project manager, conducted research, analyses and provided recommendations for solutions leading to enhancements in process as well as product upgrades at the five centers.
• Identified, specified, procured and managed the installation of EMC storage system upgrades at the five centers.
• Developed SQL Server /Access asset management database to track and manage all storage assets distributed among the five centers.

Senior HPC Computer Scientist/Technical Architect

June 1999 - September 2004 (5 years 4 months)

Wright Patterson AFB

• • Senior systems administrator for 528-processor, IBM SP3 and 256-processor IBM Scalable Power2 (SP2) systems. Installed, upgraded, and maintained software, hardware and tools necessary to provide and an effective, stable, and optimized IBM high performance computing environment.
• Developed applications for the efficient utilization of user directories of the IBM, Compaq, and SGI high performance computer (HPC) platforms.
• Developed Perl and shell (bash/ksh) scripts for various systems services in support of system administration of Unix/AIX/Linux high performance computing systems.
• Developed MS SQL scripts and C/C++ interface code to extract job information from the HPC job workload management system.
• Served as assistant System Administrator Director to provide leadership and management support of ASC MSRC operations.
• Provided project management, technical leadership, and guidance in the evaluation, design, installation and support of storage, computational, network, and other computer related disciplines, in support of new and current HPC systems installations.
• Project manager for the integration of a 140 node Linux Cluster into the High Performance Computing Center. Developed Test Plan and test cases for formal acceptance testing. Project completed on-time and on-budget.
• Designed, integrated and administered 38-processor Linux cluster for the evaluation and operation within a high performance computing environment.

• Interfaced with OEM providers as required in resolving user or system issues as they relate to the respective software and/or hardware product.

Jacobs Technology (Formerly Sverdrup)

Sr. HPC Software Engineer
1998 - 1999 (1 year)
Wright Patterson AFB, OH

• Designed, parallelized code, and led the engineering effort for the parallelization of Automatic Target Recognition (ATR) algorithms using SGI Origin 2000 HPC, IBM SP2, and Cray T3E supercomputing systems as a precursor to deployment in embedded avionic systems.

United States Air Force

9 years

Software Engineer
1995 - 1999 (4 years)
Wright Patterson AFB, OH

• Designed avionics simulation models using Ada for the Advanced Multi-Purpose Support Environment; tested software models using built-in self tests and functional operations.
• Provided technical vision and leadership in the development of a multi-site requirements development and tracking system for the Requirements community of the U.S. Air Force; Involved in all phases of the software development life cycle including providing requirements clarification, analysis of data models, Structured Query Language (SQL) scripts and client/server software deliverables designed with PowerBuilder and Oracle 7.3, software functional testing, acceptance testing, distribution and on-site installation, and user training.
• Managed 3-person development team to develop a $1.2M a proof-of-concept system to automate the tracking of software development for aircraft avionics systems. Analyzed requirements, wrote system specification, developed code, and tested the system. Designed system utilizing a rudimentary client/server (push-pull) technology using standard messages through a centralized, classified, bulletin board system. Reduced manual process from 20 Hrs to less than 1 hr. Wrote user's manual and trained personnel on-site in one-on-one and classroom settings.

Hardware Engineer
1990 - 1998 (8 years)
Wright Patterson AFB

• Designed, developed and tested a VME based computer interface monitoring and loader verifier system for aircraft embedded computers using Altera FPGAs and discreet logic components; Designed Windows test interface using C and Microsoft SDK to test the developed system.
• Developed and executed usability and functional tests, and managed the contracted effort for the Performance Monitor and Control system used to monitor and test the performance of a Mil-Std-1750A aircraft computer systems and Mil-Std-1553 avionics bus.
• Led contractor team and provided technical vision and guidance (in areas of high-speed digital design PCB design, thermal and heat dissipation design, high speed crosspoint switches, firmware design, PLD design and configuration control) for the development of a high-speed Modular Switching System.
• Conducted in-house studies and analyses of real-time multiple avionics processors to evaluate methods of monitoring embedded system processors and busses; Analyzed a variety of architectures and studied computer processors to include i960, R3000, Mil-Std 1750A, 80X86, 680X0, F9450, and others).
• Conducted in-house studies and analyses of avionics and commercial data busses to include PI-Bus, TM-Bus, Mil-Std-1553, High Speed Data Bus, VME Bus, IEEE-488, and fiber-optic I/O channels.
• Analyzed and studied intrusive and non-intrusive monitoring techniques to include shadow memory, data pumps, breakpoint, trace, snapshot, and history buffers.
• Provided consulting services and collaboration with other organizations in the development of the Virtual Test System used as a platform to test various embedded avionics computer systems.

Education

Wright State University
Masters, Computer Engineering · (2001 - 2005)

Wright State University
Bachelor, Electrical Engineering · (1987 - 1989)