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Is complexity eating you or your customers alive?

How best to cope with ever increasing demands for ***more***? Can you find somebody that can honestly check every skill and technology box and what do you do about the fact that that checklist is always expanding and changing?

Would it instead help to have somebody with qualities like these?

- Eager and rapid **learning**, and not afraid to change things up and try something new
- Able to grok both the essential **details and the big picture** in a new context and operate there
- **Translates** between the many silos of our modern world with depth but **in common language**
- Able to **take on many roles** a project might demand and **adapt** as things change
- Takes **insight from diverse and unusual places** to **form new ideas** when the usual is not enough

These multipotentialite tendencies capture how I love to work, but I also love the rigors of formal mathematics, and my broad academic roots composed of teaching from top instructors on a diverse set of subjects spanning the arts, social sciences, sciences, engineering, and mathematics. This started with my first teacher, a Manhattan Project scientist (my grandfather), and spanned through some of the top institutions in the United States including University of Illinois High School, Albuquerque Academy, and Case Western Reserve University. I have also been privileged to learn from close friends, family members and professional colleagues involved in highly significant work over the last couple generations.

Rooted in renaissance-style early education and armed with degrees in Computer Science and Psychology as well as deep backgrounds in Mathematics, Biology, Chemistry and significant exposure to many other subjects, I have been able to apply an unusual and sophisticated set of learning and thinking skills into a career that has paralleled the origins and development of the modern DevOps movement. But while steeped in distributed computing and automation, I am reluctant to advertise it as DevOps today, because it has only occasionally intersected with the big public cloud providers associated with the term “DevOps”. I have learned deeply from both the successes and failures of companies of all sizes. I have observed with interest how success turns into failure, but more importantly learned how to turn failure into success.

I stand ready today to help teams and organizations embark on a great pilgrimage. From finding a clear and common vision towards the future, to learning how to take each new step into the unknown, I can work with a broad diversity of people in different roles and positions, helping them to develop more productivity, reduce toil and friction, value and re-frame tension and conflict, accept challenge, learn from failure, and grow genuine corporate agility, resilience, and longevity. While leveraging technology and automation may certainly be a big part of this journey, I primarily focus on the problems to be solved.

When looking at genuine success, there are not magic bullets or secret formulas, but rather time, effort, and the ability to find alignment in the ideas that drive your journey. Then you must successfully execute those ideas. And success is not a destination but it is made up of certain moments in pursuit of a greater destination. My goal is to come along side and teach your team or your customers to find their own pilgrimage, and help make that a journey from success to success.

- **Process Methodologies**: Application and optimization of ISO processes. Continuous improvement (Kaizen). Continuous integration, continuous delivery and continuous deployment. Internal security process design, maintenance, and implementation. Integration of external security process requirements. Disaster recovery. Various approaches to software testing and quality assurance.
- **Systems methodologies**: Operating system and database, and file systems backups, conversions and recovery including data recovery, basic data forensics and operating systems reconstruction. P2P, P2V and V2V system conversions. VM migration and reshaping. Dynamic virtual resource allocation and management. Basic and commodity clustering and high availability (fail-over and load-sharing). Distributed computing.

Work History

Zetron Feb. 2024 (contract position with Triple Crown Consulting)
DevOps, Docker, and Kubernetes instructor:

- Developed and taught a customized all-day one-full-week course in Docker, Kubernetes and DevOps concepts for Zetron's staff from several of its global offices.
- Collaborated with company subject matter experts to launch a pilot of container and container orchestration technology use in their product development life-cycle.

DevOps research and writing 2019-present: (independent unfunded development)

- Reflecting on: "What are the core ideas behind DevOps and related cultures and/or practices?"
- Asking "What is it that makes these things successful and why do they fail?"
- Investigating the ability to apply these ideas to other disciplines.
- Looking for "cross-pollination" learning opportunities with other fields.
- Discussions with DevOps leaders and practitioners.
- Exploration with professionals in other fields regarding these ideas and parallel or contrasting practices.

Cray – HPE Cray products 2018-2022 (contract position with Triple Crown Consulting)
Firmware and BIOS teams DevOps liaison and build engineer:

- Integrated a modern DevOps team supporting builds across the full Cray supercomputer software stack with the firmware and BIOS development teams developing and maintaining these software products and supporting software aspects of Cray hardware bring-up.
- Defined CI/CD pipelines fitting the Cray software stack development model.
- Progressively integrating software and hardware testing and security compliance into the pipelines.

IBM Security Software 2012-2017 (contract position with CDI Corp.)
IBM LDAP, Access and Identity products, production build engineer:

- Part of a two person team running every aspect of production build engineering and support.
- Brought a somewhat neglected build lab brimming with technical debt up-to-date and into better shape.
- Eliminated most outage "fire-drills" to non-disruptive redundancy degradation and restoration processes.
- Improved lab-wide automation and extended this from basic automated build cycles to modern CI build practices.
- Transformed the lab with its own automated infrastructure deployments.
- Saved our division millions of dollars because our operations required two people and occasional help of a few people outside the team, rather than three or four departments and dozens of full-time staff.

IBM/Tivoli 2007-2012 (contract position with CDI Corp.)
Access Manager for Operating Systems L3 support, software engineer:

- Earned high praise from my manager: "We give you many of the hardest problems because everyone else would give up where you keep going until the problem is solved."
- Proved the depth of my ability to learn and solve problems by
  - Mastering a deeply technical and complicated operating systems security middle-ware product.
  - Learned Sparc hardware architecture and assembly language in weeks, and well enough to reverse engineer system dumps and debug complicated errant interaction patterns between our and third party products without access to the other products' source code.
- Updated our sophisticated build process to extend platform support to newer versions of Linux.

Sony Toshiba IBM (STI) 2005-2008 (contract position with CDI Corp. and IBM Global Services)
AIX/Linux Administrator and Help Desk:

- Administer an automated deployment system based partly on our prior team's work at IBM in support of the organizations simulation farm and CAD workstations.
- Administered aspects of systems security and intellectual property security for the organization.
- Developed an Apache customized build CI/CD style web server deployment.

U. S. Court Administrative Office 2003-2005 (contract position with PEC Solutions)
RHCE trainer, RedHat liaison, Linux migration and support team technical lead:

- Trained and helped build a Linux support team.
- Team developed an automated migration process allowing U.S. federal court server administrators to easily move their data and operations from Solaris to Linux.
- Established and tested new administrative standards for the court servers.

- Provided the courts with what they described as “the smoothest and easy to perform major administration process we have ever had to perform.”
- Identified and eliminated a hidden issue in court software design. In the event of a required full restore of any of the largest federal court servers, correcting this issue reduced restore times from weeks to only a day or two at most.

Independent Computer Consultant 2001-2003:
- Served Austin area clients with a variety of computer hardware, software and network services.

EriQA Labs 2000-2001
First employee / systems engineer:
- My mentor and I left IBM to build a testing and quality assurance company providing fully automated testing services to enterprise clientele using the ideas we had developed at IBM.
- Unfortunately our company launched into the “dot-com-bust” and did not reach viability.

IBM 1997-2000
DCE/SSO/LDAP systems test software engineer:
- Began to understand the importance of the ideas I had experienced at Intel.
- My mentor (a roughly 40 year veteran of IBM) and I and a few others took these ideas and began a robust program of software systems testing automation.
- Developed continuous integration (CI) system joining development middle-ware builds with systems test application software
- Built automated test platform and testing software deployment system to freshly install both test platforms and test software in hours rather than weeks
- Developed automated and distributed test tooling to execute enterprise scale systems tests over large numbers of systems with ease and well defined repeatability.

Intel 1996: (Co-op position)
Pentium [Orig/Pro/MMX/2] sort engineer:
- Absorbed the practices and culture of one of the more productive and fastest growing technology companies in the world at the time.
- Participated in a Kaizen/lean style manufacturing system and culture
- Transformed and automated engineering dominated work into work mostly performed by technicians and computers, leaving more time for engineers to focus on tasks that require their level of experience and expertise.

- **DevOps Tooling**: BitBucket, GitHub, Jenkins, Artifactory. Integrations: Slack, JIRA, Confluence, Sonar Qube, Snyk.
- **Virtualization / Containerization**: VMWare ESXi, Workstation, and Server, Linux KVM/QEMU/libvirt, VirtualBox, Docker, IBM POWER LPAR virtualization, and primitive pre-containerization UNIX process isolation methodologies.
- **Programming Languages**: Primarily C, C++, [Sparc, x86 and 68000 Series] Assembly Languages, Bash, korn, sed, awk, PERL, expect, SQL. Also varied levels of familiarity and experience with many other compiled and scripting languages including python, PHP, java, javascript, HTML, pascal, and BASIC.
- **Operating Systems**: Linux (Early free to current Red Hat Enterprise Linux [RHCE Jan. 2003], Fedora, SUSE, Debian, Ubuntu, Mint), AIX 4.x and up, SunOS 4.0-Solaris 10, HP-UX 11.x, Early DOS Windows 11 and Server versions.
- **Hardware Platforms**: Many varied Intel x86 and x64 platforms, PPC Macintosh, IBM POWER PC, Sun Sparc / Sparc64.
- **Physical Networking**: Ethernet, FibreChannel, Token Ring, Fiber Optic, serial and parallel communications.
- **Networking Technologies/Methodologies**: LAN and WAN routing, SAN, bridging, firewalls, VLAN, VPN, multi-homed and clustered network configurations, extensive experience with complex physical and logical topologies with multiple simultaneous physical formats and network protocols.
- **Storage Technologies**: IDE, SCSI, SAS, SATA, and FibreChannel storage systems, including multi-pathed, multi-initiator, SAN and direct attached configurations. Extensive use of LVM, redundant LVM, hardware RAID, software RAID configurations. NAS storage and backup solutions. Multiple tape and enterprise tape library backup systems.