David Nesting

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Who I Am

I am an engineering leader, with an emphasis in complex systems, resiliency, and solving problems. My superpowers include working with empathy, communicating with non-technical leaders, and adapting. I enjoy edge cases, adversarial thinking, and being hands-on. My interests range from hacking electronics to public policy.

Qualifications

- Can effectively lead small and large teams, both short-term task forces and long-term product delivery
- Has run a CIO organization in the federal government, and is familiar with procurement, and relevant law
- Can design, build, and support modern large-scale systems that are available, scalable, and secure against common threats
- Can understand and troubleshoot complex information systems (Google, healthcare.gov), at all layers of the stack
- Can write efficient and readable code (Go and Python are my go-tos, but also C++, Java, bash)

Overview of active security clearances available on request.

Experience

The White House, Office of Management and Budget (OMB)

Office of the Federal CIO

Cybersecurity Specialist from 2024-present:

- Senior advisor to the Federal CIO
- Policy analyst for AI, Cybersecurity, and IT Modernization
- De facto Chief Artificial Intelligence Officer (CAIO) at OMB
- Technology advisor to the OMB CIO
- Led a Technology Modernization Fund (TMF) discovery sprint to identify IT modernization activities

https://www.whitehouse.gov/omb/management/ofcio/

Rebellion Defense

Infrastructure Team Manager and **Site Reliability Engineer** from 2021-2023:

- Design and build cloud (AWS, Kubernetes), on-premise, AI, and novel infrastructure for Rebellion projects
- Improve resiliency, maintainability, and operational support
- Kubernetes, GPUs, Go

https://rebelliondefense.com/

US Office of Personnel Management

Deputy CIO from 2019-2021:

- Stabilization of high-value assets. Led a mainframe modernization activity to improve OPM's disaster preparedness and manage risk associated with multiple single points of failure.
- COVID-19 response. Introduced the agency to modern collaboration tools, such as Zoom and Slack, to prepare the agency for extended majority-telework.
- Served as technology partner to the OPM CIO, focused on investigating the technology landscape at the agency and advising the CIO organization on risk, modern practices, and engineering
- Led a mainframe modernization effort to improve OPM's disaster preparedness and manage risk associated with multiple single points of failure
- Led a deep dive into call center issues resulting in disasterous customer experience, ultimately resulting in the formation of a cross-disciplinary team of 40 people all working on a cross-section of the problem from a process, self-help, and technology platform perspective. Built a fully-functional, call-accepting reproduction of the call center using cloud tools in about 3 hours to disprove the belief that this was a multi-year level of effort.
- One time I had to build a Prometheus-based monitoring system from scratch in order to effectively troubleshoot a problem for which we had no visibility.
- One time I had to reverse engineer the agency's correspondence tracking system because it finally died and nobody knew how it worked and we needed the records out of it.
- Generally advise on cybersecurity

https://www.opm.gov/

The White House, Office of Management and Budget (OMB)

US Digital Service

Director of Engineering from 2017-2019:

- Mentored a community of ~50 engineers spread across several agencies
- Supervised work assignments for 25
- Represented engineering and IT to agency and White House leadership
- Recruiting, speaking at round tables and conferences
- Helped define and continue to maintain the engineering hiring process, and have conducted dozens of interviews for engineering and lead roles
- Data analytics and other engineering for the above goals

Site Reliability and Security Engineer from 2014-2019. Projects included:

- Healthcare.gov with HHS/CMS, on the SRE team, acting in shifts as incident commander and lead troubleshooter, while also advising the CTO and Secretary of HHS
- Login.gov with GSA, as the devops lead, improving the infrastructure for login.gov as it launched and grew, with an emphasis on availability and security
- Refugees, with the Department of State, improving the case management system
- College Scorecard with the Department of Education, performing data mapping, identifying and fixing critical performance problems and proving the ability of the service to scale
- Internal tools with US Digital Service, including building collaboration and records management tools
- Rapid-response to incidents at multiple agencies, deep dives at agencies such as the Army, State, and DOJ, consultation, and other policy work
- One time I wrote an ASP parser and data flow analyzer to automatically generate code fixes for thousands of vulnerabilities in a government system
- Security Engineering, performing code reviews, advice on prioritization and mitigation.
- Various projects, researching and advising on security threats and capabilities of nation-state adversaries
- Advised on professional and personal infosec threats to projects and USDS employees, and built and conducted bi-monthly security training and workshops for USDS.

https://usds.gov/

Google

Site Reliability Engineer from 2007-2014 (7.5 years), on the logs infrastructure team, managing all layers of the logs infrastructure, including hardware, OS,

and service. Supported data volumes of "many terabytes" and the workload of thousands of analysis users consuming "many thousands" of CPU cores. Projects included:

- 24x7 on-call responsibilities, addressing problems ranging from network issues, failed roll-outs, hardware faults (bad CPUs, RAM), misbehaving users, etc.
- Maintain and iterate on systems that ensure data integrity (strong assurances against tampering)
- Maintain and iterate on systems that ensure privacy commitments to our users were being met (anonymization, retention limits, user-requested deletion, etc.)
- Maintain and iterate on systems that controlled access and made data available to authorized analysis users
- Built a system to manage large cross-data center data migration efforts (at the petabyte scale)
- Built a system to preserve/segregate data subject to litigation
- Participated in efforts to reduce privileges and increase security of the infrastructure
- SRE hiring, conducting hundreds of engineering interviews

https://about.google/

AT&T

Technical Architect and similar roles, from 1999-2007 (8 years), on the production support team:

- Technical lead on the 24x7 operations team supporting www.att.com and similar sites
- Sole team member with development background, so I wrote a lot of tools and software to help automate our work, and was the only team member who could meaningfully engage with the dev teams to troubleshoot problems
- Significant role with AT&T's "shadow IT", spending a lot of time trying to make software engineering suck less, given AT&T's engineering- and innovation-hostile corporate culture.

https://www.att.com/

Texas Networking, Inc.

Engineer, from 1995-1999 (approx.), as a member of the engineering staff. This was a small/startup regional ISP.

- Technical helpdesk, troubleshooting internet, networking, and client system problems

- Customer-facing documentation
- Writing small tools and internal servers to automate tasks and monitor infrastructure

Education

Texas A&M, Computer Engineering major, 1998