

CAROLYN TOPPER

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SUMMARY

My background is somewhat non-traditional; although my academic training is in the humanities, having studied art and Japanese language and literature in undergraduate school, my career has been primarily focused on technology. I am knowledgeable not only in Unix administration and networking, but also electronics and media production and post-production. I have dabbled in proprietary enterprise software and their FOSS counterparts, as well as custom applications written by research institutions and national laboratories. Currently, I am pursuing further education in information security and a master's degree in the liberal arts, with a focus on the sociological implications of the ever-advancing technologies which we create.

EXPERIENCE

Senior Systems Administrator

September 2022 – Present

The University of Chicago - Department of Astronomy and Astrophysics and KICP

Chicago, IL

- Striving to document, maintain, and eventually upgrade and automate infrastructure running a combination of CentOS, FreeBSD, and Debian
- Inherited an environment running on decades-old hardware with no data redundancy and so built a Proxmox virtualization cluster worth over \$250k in less than a month by finding donors, utilizing industry contacts, and recycling equipment from other departments
- Consolidated all licenses into a single Docker container and developed tool to view license status that integrates with FlexLM
- Built a package repository for specialized software
- Built and maintained systems for research projects which are sponsored by federal grants and agencies
- Collaborated with campus networking team and external contractors to ensure smooth transition to new networking hardware and firewall standards

Senior Systems Administrator

July 2022 – August 2022

The University of Chicago - Department of Computer Science

Chicago, IL

- Designed network architecture and provided AV consultation for an emerging program's move to a new building
- Managed systems in an almost entirely Unix environment, including macOS laptops and workstations (ranging from v. 10.14 Mojave through 12 Monterey), Raspberry Pi's, and Linux desktops and servers (primarily Ubuntu 18.04 through 22.04), and provided support for office equipment and client BYOD laptops and smartphones
- Used version control to create departmental user accounts and modify DHCP and DNS configuration files to reserve IPV4 addresses for desktops and servers and set human-readable hostnames in BIND
- Did SLURM administration on a HPC cluster (IAM, resource allocation, and resolving node drain states)
- Assigned firewall rules in iptables
- Pointed Apple devices in DEP to our management server at simpleMDM for enrollment and configuration
- Created software packages in Munki to deploy to department iMacs and MacBooks
- Used Time Machine to create backups for department managed Macs
- Experience installing operating systems by creating bootable USB media or over the network using mirrors in Foreman
- Conducted replacement and repair of hardware in desktop machines and servers including fans, PCI-e cards, storage drives, CMOS batteries, power supplies, and GPUs

Audio-Visual, Sr. Analyst

March 2020 – July 2022

The University of Chicago - Department of Computer Science

Chicago, IL

- Took on audio-visual, systems administration, and desktop support tasks to support the University community
- Wrote documentation for the departmental wiki
- Coordinated with University-preferred vendors to RMA failed equipment
- Managed two large video projects of more than twenty-five participants each by organizing a content submissions schedule, conducting follow-ups, and doing post production which included creating title slates, upstream keys, story building, trimming video, audio editing and leveling, transcoding, and captioning
- Built a recording studio for instructors to create materials for remote instruction. Features included a chromakey, two seating locations/'scenes,' a document camera, laptop inputs, a preview monitor, three point lighting, lapel and tabletop microphones, and button control interfaces

- Helped to design and implement solutions and create training documentation for hybrid classroom and meeting solutions following the return to the office
- Used configuration management software (Puppet) to push software to machines, install updates, ban rogue accounts, and add users to servers and POSIX groups via configuration files
- Saved the department over \$30,000 in labor costs by pulling and terminating cable for two projects: one to improve the reliability of digital signage, the other to add additional networking functionality to projectors in instructional lab spaces, where I also reprogrammed their Extron devices and Crestron control interfaces
- Utilized VLANs to create network segmentation and configured user accessible switches to implement VLAN tagging and Spanning Tree to prevent switching loops
- Recorded and live streamed events (to Zoom, YouTube, and our own infrastructure) using PTZ cameras, Shure microphones, Behringer mixers, and OBS software, using NDI Studio Monitor to facilitate live switching of cameras

COMMUNITY & LEADERSHIP

Associate Member <i>Institute of Electrical and Electronics Engineers (IEEE)</i>	August 2023 – Present <i>Calumet Section</i>
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EDUCATION

The University of Chicago <i>Master of Liberal Arts - Candidate</i>	Chicago, IL 2024 - present
<ul style="list-style-type: none"> • Concentration in Technology & Society 	
Kalamazoo College <i>Bachelor of Arts, Studio Art - Cum laude</i>	Kalamazoo, MI 2013-2017
<ul style="list-style-type: none"> • Honors in Major, Minor in Japanese Language • Japanese National Honor Society (2017) • Teaching Assistant - Figure Drawing - Department of Art and Art History (March - June 2016) • Research Assistant - Transcription Writer and Translator for “War Memories: Intergenerational, Intercultural Oral History Project” - Department of East Asian Studies (February - August 2017) 	
Extron Institute <i>Various Certifications</i>	Online 2022
<ul style="list-style-type: none"> • AV Associate, ECS • Verify with last name ‘Topper’ and training ID ‘1101676’: https://www.extron.com/training/transcript.aspx 	
ISC2 <i>List of Current Certifications</i>	Alexandria, VA 2024
<ul style="list-style-type: none"> • (CC) Certified in Cybersecurity - Issued May 2024, Expires May 2027 	

TECHNICAL SKILLS

Operating Systems (Unix, Linux, macOS, Windows) · Hypervisors and Virtualization (VirtualBox, Proxmox) · Markup Languages (HTML5, CSS, TeX) · Scripting and Programming (Bourne shell, Python, Javascript, Ruby, PHP) · Networking (BIND, Infoblox, IP stack, DHCP, Cisco, Arista, and Ubiquiti managed switch configuration) · Pro AV Equipment (Shure, Behringer, Crestron, Extron, Blackmagic Design) · Remote Access (VNC, MeshCentral, PuTTY, SSH) · VPN (Cisco AnyConnect, SSH tunneling), Diagram Creation and Interpretation (AutoCAD, Revit) · Remote Collaboration (Zoom, GoToMeeting, WebEx, Teams) · Git · Configuration Management (Salt, Puppet, simpleMDM) · Digital Media Production (OBS, Adobe CC, DaVinci Resolve, Audacity) · Databases (OpenLDAP, MySQL, PostgreSQL, MongoDB, MariaDB) · Technical Project Planning and Management · Technical Process and Systems Documentation