**Welcome to CORE-IT**

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| CORE-IT is a free online (virtual) conference focused on “up-skilling” and mentoring current and future IT/cyber professionals.  Thirty technical tracks cover essential tools, key protocols, and best practices in network troubleshooting, security, and performance. Open Badges offer micro-credentials on almost every topic covered.  Registration: <https://engagez.net/coreit1> Information: <https://www.chappell-university.com/core-it> | We are excited to invite you to meet and mingle with many of the industry’s top presenters and mentors in IT/cyber security. Catch a technical session, chat with sponsors, make friends with like-minded techies and score some Open Badges along the way!  It’s a party – come hang out with us!  ***Laura Chappell*** Founder of Chappell University and CORE-IT Host |

A close up of a logo

Description automatically generated CORE-IT VIRTUAL CONFERENCE AGENDA (v1F)

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|  | Track 1: Essential Tools  (Babbage Room) | Track 2: Key Protocols  (Cerf Room) | | | Track 3: In Practice  (Lovelace Room) |  |
| Day 1 March 24 | Day 2-7: After first presentation, all sessions go into “on-demand mode” until midnight, March 30th | | | | |  |
| 9:00-9:20a | Welcome: Introduction to CORE-IT  Your event host, Laura Chappell, introduces the CORE-IT virtual environment navigation, what’s available in the Open Badge Quiz Room, Exhibit Hall and interacting in sponsor booths, what you can find in the Chat Lounge, and where to get your “Mentor Manual” ebook. | | | | | **Open from March 24-30th**   * Exhibit Hall (including the Student Union booth) * Open Badge Quiz Center * Chat Lounge |
| 9:20-9:50a | 1.1 Security Onion: Toolkit  Security Onion Core Open Badge  Doug Burks, creator of Security Onion, highlights the key tools in the Security Onion toolkit (such as Elasticsearch, Kibana, and Zeek) and how to “peel back the layers of your enterprise." Visit the *Security Onion booth* for more details. | | 2.1 TCP/IP Communications Overview  A picture containing clipart  Description automatically generated TCP/IP Core Open Badge  Laura Chappell, Wireshark expert and evangelist and event host, sets the groundwork for this track by following packets through a network and defining the use of various TCP/IP protocols and applications. Visit the *Chappell University booth* for more information. | 3.1 Five Quick Performance Measurement Exercises  A picture containing clipart  Description automatically generated Performance Measurement Open Badge  Tony Fortunato, Founder of The Technology Firm, explains how to quickly measure performance between network devices using a combination of tools and how to obtain a baseline of local host performance. Visit the *NetworkDataPedia* booth after. | |
| 10:00-10:30a | 1.2 Wireshark: Traffic Analysis  A picture containing clipart  Description automatically generated Wireshark Core Open Badge  Laura Chappell focuses on top skills to master in Wireshark, including profiles, filters, and statistics. Visit the *Chappell University booth* for more details. | | 2.2 IPv4 Core Functionality  A picture containing clipart  Description automatically generated IPv4 Core Open Badge  Starting with IPv4, we are now down to the bits and bytes of the protocols. Learn core IPv4 functionality by delving into the IPv4 header and focusing on IP header processing along a path. | 3.2 Open Source Intelligence (OSINT) In Action  A picture containing clipart  Description automatically generated OSINT Core Open Badge  John Gonder walks you through the process of performing an Open Source intelligence-gathering process using the OSINT framework. | |
| **[continued]** | Track 1: Essential Tools  (Babbage Room) | | Track 2: Key Protocols  (Cerf Room) | Track 3: In Practice  (Lovelace Room) | |  |
| 10:40-11:10a | 1.3 TraceWrangler: Trace File Editing  A picture containing clipart  Description automatically generated TraceWrangler Core Open Badge  Jasper Bongertz, creator of TraceWrangler, shows you how to anonymize your trace files for security or privacy reasons. | | 2.3 IPv6 Core Functionality  A picture containing clipart  Description automatically generated IPv6 Open Badge  Jeff Carrell, renown IPv6 instructor, explains the core functions of IPv6 including bootup and address assignment processes. | 3.3 Ethical Hacking Essentials  A picture containing clipart  Description automatically generated Ethical Hacking Core Open Badge  Don Donzal, Founder and Editor-in-Chief of *The* *Ethical Hacker Network* magazine, delves into the topic of ethical hacking and how to plot your career. For more information, visit the *eLearnSecurity booth*. | | **Open from March 24-30th**   * Exhibit Hall (including the Student Union booth) * Open Badge Quiz Center * Chat Lounge |
| 11:20-11:50a | 1.4 Nmap: Network Scanning  A picture containing clipart  Description automatically generated Nmap Core Open Badge  Learn how Nmap (“Network Mapper”) is used for network discovery and security auditing. We will go over the key pre-made profiles and customization techniques. | | 2.4 802.11 Core Functionality  A picture containing clipart  Description automatically generated 802.11 Core Open Badge  Keith Parsons, Managing Director of WLAN Professionals Conference and WLAN guru, dives into the core functionality of WLANs including typical wireless network communications/architecture. | 3.4 In the Packet Path: Tapping, Spanning, and More  A picture containing clipart  Description automatically generated Packet Capture Core Open Badge  Mike Pennacchi explains and compares the efficiency of the options available for packet capture. Not all methods provide equal results. Visit the *Network Protocol Specialists* booth afterwards. | |
| 12:10-12:40p | 1.5 Tor: Diving into Darknets  A picture containing clipart  Description automatically generated Tor Core Open Badge  Andrew Lewman, co-creator of Tor, explains how Tor offers anonymous browsing, the three essential Tor path elements, supported modes, and how to set up a darknet investigation system based on Tor. | | 2.5 TCP Core Functionality  A picture containing clipart  Description automatically generated TCP Core Open Badge  Laura Chappell covers the core (and key) functions of TCP including socket-to-socket connection, transmit/receive buffer use, sequencing of data, error detection, and more. Visit the *Chappell University booth* for more information. | 3.5 Long-Term Packet Capture  A picture containing clipart  Description automatically generated Long-Term Capture Core Open Badge  Mike Pennacchi, Founder of Network Protocol Specialists, delves into long-term packet capture tricks and how to overcome the dreaded “hard drive full” problem. Visit the *Network Protocol Specialists* booth afterwards. | |
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| 12:50-1:20p | 1.6 iPerf: Performance Benchmarking  A picture containing clipart  Description automatically generated iPerf Core Open Badge  Mike Pennacchi dives into iPerf to demonstrate how solid performance benchmarks can be created by tweaking a few of iPerf’s parameters. Visit the *Network Protocol Specialists* booth afterwards. | | 2.6 TLS Core Functionality  A picture containing clipart  Description automatically generated TLS Core Open Badge  Sake Blok, Wireshark Core Developer and Founder of SYN‑bit, takes you inside TLS to examine the handshake process, cipher offer/selection process, and more. Visit the *SYN-bit* booth afterwards. | 3.6 Hunting Suspects on the Darknet  A picture containing clipart  Description automatically generated Darknet Hunting Core Open Badge  Andrew Lewman, co-creator of Tor, explains his investigation set-up and goes right into the darknet to find folks selling drugs, guns, and more. | | **Open from March 24-30th**   * Exhibit Hall (including the Student Union booth) * Open Badge Quiz Center * Chat Lounge |
| 1:30-2:00p | 1.7 Autopsy: Open Source Forensics  A picture containing clipart  Description automatically generated Autopsy Core Open Badge  This session focuses on the key elements and use of Autopsy, a free GUI-based forensics program used to analyze drives and phones. | | 2.7 HTTP Core Functionality  A picture containing clipart  Description automatically generated HTTP Core Open Badge  HTTP is a request/response data transfer application. In this session we will examine HTTP requests, responses, and application response time. | 3.7 Social Engineering  A picture containing clipart  Description automatically generated Social Engineering Open Badge  Henry Danielson, CISSO and Cal Poly Adjunct Professor, examines the psychological and technical tactics used by highly successful social engineering professionals. | |
| 2:10-2:40p | 1.8 NetScanTools Pro: Toolkit  A picture containing clipart  Description automatically generated NetScanTools Core Open Badge  Kirk Thomas, creator of NetScanTools Pro, and Laura Chappell will focus on using NetScanTools Pro for passive and active reconnaissance processes. Visit the *NetScanTools booth* for more details. | | 2.8 DNS Core Functionality  A picture containing clipart  Description automatically generated DNS Core Open Badge  Betty DuBois, renown Wireshark trainer, focuses on DNS functionality as a request/reply application for name resolution and more. Learn what’s inside those DNS packets. | 3.8 Essential Elements of Pen Testing  A picture containing clipart  Description automatically generated Pen Testing Core Open Badge  Terry Cutler, Certified Ethical Hacker and Founder of Cyology Labs, defines key elements of penetration testing and offers important advice to keep yourself out of jail. Visit the *Cyology Labs* booth. | |

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| 2:50-3:20p | 1.9 Sneak Peek: Brim  A picture containing clipart  Description automatically generated Brim Core Open Badge  We are pleased to present a new open-source tool that will help you get to the interesting packets faster, both for general network troubleshooting and IT/cyber security! Visit the *Brim booth* for more details. | 2.9 The Cold War for Encrypted DNS  A picture containing clipart  Description automatically generated DNS DoT/DoH Core Open Badge  Ginny Spicer shows you how to configure, compare and contrast two options for encrypted DNS: DNS over TLS (DoT) and DNS over HTTPS (DoH). We recommend you also check out session 2.10 for Paul Vixie’s views. | 3.9 Analyze TCP Window Scaling  A picture containing clipart  Description automatically generated TCP Window Scaling Core Open Badge  Betty DuBois demonstrates how TCP Window Scaling is enabled in the TCP handshake process and how Window Scaling can help improve data transfer rates across networks. | **Open from March 24-30th**   * Exhibit Hall (including the Student Union booth) * Open Badge Quiz Center * Chat Lounge |
| 3:40-4:10p | 1.10 TBD  This session is under review and topic/speaker will be announced as soon as possible. | 2.10 The Cold War for Encrypted DNS – Dr. Paul Vixie’s Perspective  Ginny Spicer sits with Dr. Paul Vixie (Internet Hall of Fame, Innovator) to talk about the pros and cons of DoT and DoH and find out how he protects his own DNS traffic. | 3.10 Wireshark Decryption Tricks  A picture containing clipart  Description automatically generated Wireshark Decryption Open Badge  Laura Chappell demonstrates how to configure your host to capture session keys and apply those keys to Wireshark’s TLS dissector for clear-text analysis. Don’t forget to visit the *Chappell University* booth for the *Network Forensics Cheat Sheet*! |
| 4:10-4:30p | End of Day: Wrap-Up After each session runs for the first time, it is moved into an “on-demand mode” and available for viewing until midnight March 30th, Pacific Time. Your event host, Laura Chappell, reiterates that the Open Badge quiz room, Exhibit Hall and booths, and the Chat Lounge remain open and interactive until midnight March 30th, Pacific Time. | | |  |

