Danis Fermi

linkedin.com/in/danisfermi | github.com/danisfermi
dfermi@ncsu.edu | +1 919 670 8734 | Skype: live:danis_fermi

EDUCATION

NC STATE UNIVERSITY
MS in Computer Networking
May 2018 | Raleigh, NC

NIT CALICUT
B.Tech in Electrical & Electronics Engineering
May 2014 | Calicut, India

COURSEWORK

GRADUATE
Switched Network Management
Internet Protocols
Computer & Network Security
Routed Network Design
Software Defined Networking
Advanced Topics in Internet Protocols
Design & Analysis of Algorithms
Operating Systems
Cloud Computing
Wireless Networking
Linux Networking

SKILLS

CCNP & CCNA Trained

PROGRAMMING
C/C++ • Python • Shell Scripting

SYSTEMS
Linux (CentOS, Debian) • Cisco IOS CLI

NETWORKING
LAYER 2: EtherChannel • ARP • STP [RSTP, MST, PVST]
LAYER 3: OSPF • BGP • RIP • HSRP, VRRP, GLBP
VIRTUALIZATION: MPLS • VLAN • VxLAN • VPLS • VPN • Hypervisors [KVM, VirtualBox] • Containers [LXC, LXD]
OTHER: TCP/IP • DNS • SSH
CLOUD COMPUTING: OpenStack • VCL • Basic AWS
STORAGE: Basic NAS & SAN Protocols
SDN: OpenFlow • Ryu Controller • OVS
IoT: MQTT • CoAP • 6LoWPAN
DEVOPS: Basic Ansible & Vagrant
SECURITY: Wireshark • Metasploit • Burp Suite
TOOLS: SNMP-MIB • Wireshark • OpenNMS • VIRL • ExoGENI • GNS3 • Cisco Packet Tracer

EXPERIENCE

INTEL CORPORATION | Network Software Engineer
Jul 2018 – Now | Austin, TX
C Applications for Intel Axxia and Xeon processors. DPDK Fast Data Path for 5G. Linux OS internals and Bash Scripting

VIRTUSAPOLARIS SOFTWARE SERVICES | Database Engineer
Jun 2014 – Jun 2016 | CN, India
Database Management. Business Intelligence. Linux OS. Bash Scripting

PROJECTS

LINUX NETWORKING & CLOUD COMPUTING LAB | Linux & Python
Create & manage VMs using KVM, libvirtd • Virtual Networking using Linux Bridges, OVS • Configuring SSH, Tunnels etc. • VM Management on VCL • Automation using Python, Bash

OPENSTACK ON A STICK | Bash
Automated Installation & Troubleshooting of OpenStack on VT capable x86 machines • Single Node & Multi-Node Cluster Support

NON-PERSISTANT HEAP USING KERNEL MODULE | C
Developed an in-memory kernel module for data sharing between processes • Extended degree of parallelism using transactional memory • Developed a FUSE File system for the device

LINUX FIREWALL KERNEL MODULE | C
Implemented Linux Firewall using Netfilter hooks • Accepts Firewall rules as input from user using procfs during runtime

SCALABLE REST-API WEB APPLICATION | Python & HTML
RESTful-API web app [GET/POST/PUT/DELETE methods] using Python & Flask •mySQL Backend • HTML Frontend • Python script to interact with the web application • Automated Deployment using ANSIBLE & wsgi module of Apache • Automated Scaling using HAProxy • Firewall configuration using IP Tables

LINK UTILIZATION & TRAFFIC ENGINEERING | Python & C++
Traffic Engineering in NMS based IP networks & SDN Networks (Ryu Controller & OVS) • Code to interact with SNMP MIB & implement feedback model for OSPF cost management • Code to discover topology, gather network statistics (for feedback) & forward packets using Djikstra's Algortihm

SDN BASED INTRUSION DETECTION SYSTEM | Python
A research paper that proposes a logical model for an SDN based Intrusion Detection System • Code to gather per flow & per flow statistics

SWITCHED & ROUTED NETWORK MANAGEMENT LAB
OSPF (Areas, Route Injection), BGP (ASs, eBGP & iBGP Config, Inbound & Outbound Routes, Route Filtering, ACL, Verification Plans), PBR • Switch Fabrics (Fat Tree, Leaf-Spine Switch Fabrics, Multi-Tenant Management, SLAs) • VLANs, Trunking, SVIs, Router-on-a-stick, STP, RSTP • Network Troubleshooting on Cisco Equipment

CHAT BASED PEER-TO-PEER FILE TRANSFER | Python
Centralized chat server using TCP • Peer-to-peer file transfer [w Chat] using UDP • TCP features like ACKs, Go-Back-N with with variable window size etc. on top of UDP

REVERSE PORT KNOCKING SHELL | Python
Python-based backdoor that runs passively, listens to a predefined sequence of knocks • Downloads & executes commands on successful knock • Python-based knocker to stimulate the knock