Position: Cloud Infrastructure Engineering Student
Term: Winter 2023 (January 2nd 2023- April 28th, 2023)

About Us:

CENGN is Canada's Centre of Excellence in Next Generation Networks. Our mission is to drive technology innovation and industry growth through our test bed, technical expertise, talent development, and partner ecosystem, to enable economic strength and prosperity as well as innovation and competitiveness for Canada in the high-growth global multi-trillion dollar Information and Communications Technology (ICT) industry.

CENGN collaborates with national and global technology leaders, the public sector, and academic partners, to solidify Canada's leadership in advanced networking technology for the benefit of all Canadians. Our members and partners are a crucial part of CENGN's operation, providing us with the technologies and support needed to enable our service offerings to Canadian small and medium enterprises.

By providing growing Canadian businesses with the infrastructure and expertise required to test their products, these tech startups and scale ups can overcome commercialization barriers. CENGN provides these businesses with full support of the development, validation, and exposure of their innovative solutions. CENGN also develops Canadian talent through co-op and internship opportunities as well as training offerings. Approximately 40 students complete CENGN internships annually to strengthen their knowledge and understanding of their position by tackling new and exciting challenges.

CENGN's ecosystem includes members BC Tech, Bell Canada, Bioenterprise, Cisco, EXFO, Hub350, Juniper Networks, Kandy.io, Mitel, Nokia, Ribbon Communications, TELUS, University of Ottawa, and Wind River.

What We offer:

- An environment providing flexible working hours and location
- The experience of working with cutting edge and relevant technology
- The opportunity to work in our state of the art physical and virtual multi-vendor, test, certification and validation platform, which provides a unique environment to commercialize advanced products, applications and services
- The experience of developing and deploying wired and wireless technologies that are utilized by applications such as cloud, wireless 5G, autonomous vehicles, broadband Internet and cybersecurity
- The reward of contributing to the Canadian ICT sector and helping to stimulate economic development
- The benefit of a small company in a modern setting with opportunities for growth
- The ability to work on real and impactful work that contributes directly to the company's success
- The freedom to share and execute your own ideas that are nurtured and encouraged
- The advantage of working with other students, full-time staff, and our executives who are all passionate about their individual contributions to CENGN
- Work in a consortium organization gaining exposure to the most innovative small business as well as the most well-established telecom companies in Canada and the world

For more information, visit www.cengn.ca

The Opportunity:

We are seeking a highly skilled and motivated individual for CENGN's Engineering team for a 4-month co-op term. You will be reporting to the Vice President of Engineering Operations, and will work on technical projects associated to CENGN Members and Partners as well as helping to implement new CENGN services supporting the SME projects in a wide variety of next generation technologies led by the CENGN engineering team.

You will start the term by going through a boot camp to learn the latest cloud technologies like OpenStack, Docker and Kubernetes, as well as next generation networking technologies such as Network Function Virtualization (NFV) and general professional and collaboration skills. Upon completion of this boot camp, the student will attempt the CENGN Cloud System Specialist certification.

For more information about our boot camp visit https://www.cengn.ca/cloud-system-specialist-certification/

Throughout the term, CENGN will leverage you, the Infrastructure Engineering student, to evaluate the maturity of early open source technologies and solutions in the domains of Cloud computing, Software Defined Networks, Wireless networking, Internet of Things and Cyber Security. The assessment work you'll do will accelerate the decision process associated to new solutions in a very dynamic world keeping CENGN on the leading edge of technology. At the completion of the term, you will be able to demonstrate and articulate in depth understanding of new technologies both internally to CENGN team members as well as externally to CENGN members and partners.

Being a student on the Infrastructure Engineering team gives you the chance to learn continuously and the opportunity to live on the leading edge of networking and computing innovation, all while making an impactful contribution in the Canadian ICT sector and in Canadian businesses.

This position involves participation in events which may require the student to be available outside normal working hours on a few occasions during the placement. Applicants should expect to be required to work irregular hours 1-3 times during the contract.

Key Responsibilities:

As an essential part of the Infrastructure Engineering team, students will have opportunities to contribute to many different aspects of CENGN's infrastructure. Key responsibilities in doing so include the following:

- Working with the Engineering team to evolve the platform based on business and customer needs as well as to stay on the cutting edge of technology.
- Collaborating in a professional and technical manner with everyone at CENGN

Key Competencies/Qualifications:

- Academic understanding **or** hands-on experience with:
  - **Networking** and systems principles
  - **Virtualization** architecture and principles
- **Linux system** components and virtualization features (e.g. libvirt, KVM/QEMU)
- **Cloud platform usage or administration** (e.g. private clouds such as OpenStack, public clouds such as AWS, Azure, or GCP)
- **Container technology** (e.g. Runtime engines such as Docker or CRI-O, container orchestration tools such as Kubernetes)
- Consuming, contributing to, or presenting about **open-source projects**
- **Programming** languages (e.g. Python, Golang)

- **Automation** (Ansible, bash scripting, network automation)
- Next-generation **security** solutions (e.g. IDS/IPS, NGFW, UTM, OPNSense)
- Any of the followings would be considered an asset:
    - Code and/or projects available for review on Github or other public repositories
    - Experience in Datacenter environment
    - Experience in supporting users in an IT environment
    - Experience with Atlassian tool set (JIRA, Confluence, BitBucket)
    - Desire to learn and develop while exercising and demonstrating solid problem-solving skills
- Ability to work individually and within a team by leveraging all available resources

Education:

Post-secondary education in Software Engineering, Computer Science, Engineering, IT or related discipline

Eligibility

Students who are enrolled or have graduated from post-secondary institution programs which provide the relevant background and aptitude to work and enhance their skills as per the requirements of CENGN's listed student postings will qualify for internships under this program.

- Students can be at the undergraduate level (current students) or graduate level (current masters and PhD students), or they may be recent undergraduate and master graduates within three years of graduation from an Ontario-based post-secondary institution
- The student must be eligible to work in Ontario and have employee status at the company for the duration of the internship (Canadian citizen, permanent resident, or on a work/student visa).
- The student may not apply with a company where there is any conflict of interest, including, but not limited to, a company where the student or relatives have any control as a major creditor or shareholder or governing board
- As a condition of employment and in accordance to CENGN's Code of Conduct Policy, all students must maintain a clean criminal record. CENGN engages a third-party provider to verify student backgrounds prior to the start of the internship

Languages:

- English oral, reading and writing
- Competency in any other language could be considered an asset

Interested and qualified candidates are invited to upload their resume in confidence to CENGN through the following link, Resume submission - CENGN Application Portal - Service Desk. Please select " **Cloud Infrastructure Engineering Student**" as the position title.

CENGN reserves the right to remove this posting prior to the application deadline. CENGN thanks all applicants for their interest, however, only those selected for an interview will be acknowledged. CENGN is an equal opportunity employer.