Position: Cloud Technology Research Student

Term: Winter 2020 (January 6, 2020 – April 24, 2020)

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 next generation networks 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 (SMEs).

By providing Canadian SMEs with the infrastructure and expertise required to test their products, these growing businesses can overcome commercialization barriers. CENGN provides SMEs with full support of the development, validation, and exposure of their innovative solutions. CENGN also develops talent through co-op and internship opportunities as well as training offerings for professionals.

CENGN's ecosystem includes members Bell Canada, Cisco, EXFO, Huawei, Invest Ottawa, Juniper Networks, Mitel, Nokia, Ribbon Communications, TELUS, and Wind River. CENGN also partners with the federal government through the Networks of Centres of Excellence (NCE) and the Ontario government through the Ontario Centres of Excellence (OCE).

CENGN also develops talent through co-op and internship opportunities as well as training offerings. Approximately 40 students complete internships annually to strengthen their knowledge and understanding of their position by tackling new and exciting challenges.

What We offer:

- An environment providing flexible working hours and location
- The gain 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 Training department for a 4-month co-op term. Reporting directly to the Senior Manager of CENGN's Training Programs, this individual will start the term through a boot camp to learn the latest in cloud technologies like OpenStack, Docker and Kubernetes, as well as next generation networking technologies such as Network Function Virtualization and general professional and collaboration skills. Upon completion of this boot camp, the student will attempt the CENGN Cloud System Specialist certification exam.

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

CENGN Academy focuses on practical, use-case driven training in commercial cutting-edge technologies, with an open source flavour. Hands-on training is supported by CENGN's unique cloud-based lab infrastructure. Throughout the term, the Cloud Technology Research student will assist in creating and updating CENGN Academy's training content. The student will also help develop, optimize and maintain the underlying infrastructure.

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 3-5 times during the contract.

Key Responsibilities:

Due to the rapid evolution of the emerging network technologies for which CENGN is in the forefront, the Cloud Technology Research Student plays an important role in developing and maintaining CENGN's technical training content, which continuously evolves. The main responsibilities are:

- Collaborate in a professional manner among a team of experienced engineers and trainers
- Investigate and document leading edge technologies, such as cloud systems, software defined networking, security, high-speed wireless and open source technologies
- Demonstrate and articulate in depth understanding of these technologies both internally to the CENGN team as well as externally to CENGN members and partners
- Create and update training materials using CENGN's standard templates
- Develop and maintain CENGN's cloud infrastructure for hands-on training exercises
- Create and optimize automated lab setup and maintenance routines
- Assist in the development of assessment instruments
- Support CENGN Academy training events
- Contribute to technical projects in NGN technologies as led by CENGN's engineering team
- Support presentations at public events like meetups and other technical forums
- Other duties as required

Key Competencies/Qualifications:

- Desire to learn and develop while exercising and demonstrating solid problem-solving skills
- Ability to work autonomously within a team leveraging online collaboration tools
- Solid practical experience with TCP/IP networking
- Good understanding of hypervisor architecture and principles
- Exposure to and interest in Linux system components and virtualization features (libvirt, KVM/QEMU, kernel/user namespaces)
- Experience in consuming or contributing to Open Source projects
- Excellent interpersonal, organizational, and communication skills
- Strong English language writing and editing skills
- Experience in/with any of the following would be considered an asset:
  - Technical writing

- o Datacenter environment
- o Public and/or private cloud services
- o Cloud Native / microservice architecture using technologies like Docker and Kubernetes
- o Programming or scripting
- o Illustration and/or video editing software
- o Next generation security solutions (NGFW, UTM, IDS/IPS, MDM)
- o Agile methodology
- o Atlassian toolset (Confluence, JIRA, etc.)
- o Teaching assistant or another instructional role
- o Code available for review on public repositories (e.g. Github)

Education:

Post-secondary term 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 forward their resume in confidence to CENGN by email to **student-hr@cengn.ca**. Please use "**Cloud Technology Research Student**" as the subject line.

CENGN thanks all applicants for their interest, however, only those selected for an interview will be acknowledged. CENGN is an equal opportunity employer.