IT Specialist (Mar 2017)

3v Geomatics Inc. (3vG) is looking to add a key team member for scaling up our data processing capabilities.

The Company

3v Geomatics (www.3vGeomatics.com) is a fast-growing tech company in Vancouver, British Columbia. 3vG uses radar satellite images to measure changes on the Earth's surface for operational decision making. We develop software and image processing algorithms to monitor infrastructure and ground movement precisely and reliably. We strive to use our products to make a positive impact on people around the world.

The launch of numerous radar satellites in the last decade, with many more upcoming ones, has contributed to a data explosion in our industry. Our storage and processing cluster has been expanding constantly, and we are now scaling up to process and store petabytes of data. We use high power CPUs and GPUs to quickly analyze large images with computationally dense algorithms.

The Position

We are looking for an individual to enhance and boost our existing infrastructure team. The "big data" solutions we are developing run primarily on Linux. Our image processing chains are written in Python, C++, and CUDA with occasional Bash scripting. We exclusively use Linux for our cluster and generally avoid proprietary technologies in our data processing stack. This role is to assist and complement our existing infrastructure team as they handle continued growth and expansion of our staff and compute needs, including:

- Cluster efficiency: As we develop new software and processing chains, we need to continually monitor efficiency to ensure that existing compute power and storage are being used efficiently.
- Cluster expansion: As business needs grow and more complex software is written, our compute and storage clusters need to grow with them.
- Queue management: Ensuring that high priority compute jobs run as soon as possible requires regular tuning of our queue management system and occasional manual intervention.
- Cloud computing: We are adding the cloud to our infrastructure for off-site backups and to handle short bursts of overflow processing needs.
The IT Specialist is expected to help the existing IT team with day-to-day activities as well as contributing to the long-term expansion and evolution of our processing chain. The successful candidate will have a Diploma in a computer related field or equivalent background, with 2+ years of hands-on Linux experience; she or he will have the right mix of hardware and software skills, and meet the following qualifications:

- Linux proficiency, preferably command line in addition to graphical environments (specifically CentOS 7)
- Scripting and debugging experience in Python and Bash
- Server hardware maintenance and troubleshooting skills
- Persistent problem-solver
- Demonstrated initiative and responsibility
- Communicative and detail-oriented
- Ability to work closely with non-IT personnel
- Willingness to learn new skills on the job

The following skills would be an asset:

- Cluster management (Son of Grid Engine or similar)
- Large or distributed data storage systems (ZFS on Linux, MegaRaid, SAS)
- Python, C++, CUDA and Linux driver debugging
- Windows desktop administration
- Performance and health monitoring systems (Graphite, Nagios)
- Automated deployment and system management (Puppet, Group Policy Objects)
- Experience with Amazon Web Services (EC2, S3 & Glacier)
- Experience with data processing pipelines and related infrastructure (scheduling, acquisition, ingestion, processing, QC, delivery)

**The Work Environment**

At 3vG, you will be challenged to perform your best and develop your skills in an open and collaborative environment. Your role will grow as you expand your capabilities. You will be expected to contribute to a strong and supportive team where constant learning is the norm.

We are centrally located in Vancouver, near Broadway and Cambie. The Company environment includes a diverse group of employees from around the world, flexible hours, work social events, and a secure area for bike commuters.

We invite you to submit your resume to info@3vGeomatics.com