Research Associate IV
Cloud Security Analyst
23-140

Position Summary:
The Cooperative Institute for Research in the Atmosphere (CIRA) at Colorado State University seeks to fill a full-time professional research position for its collaborative research and development as a Cooperative Institute with the National Oceanic and Atmospheric Administration (NOAA) National Weather Service (NWS) Office of Science and Technology Integration (OSTI) in Silver Spring, MD. This position is located in a federal facility in Silver Spring, MD and requires the ability to pass a National Agency Check with Inquiries (NACI, federal background check) for building access. This position is located in Silver Spring, MD; however, the option exists to work remotely from your home/office with periodic coordination meetings in Silver Spring.

The primary goal in the research partnership between the NWS OSTI and CIRA has been to keep abreast of advanced technology and apply it to OSTI. The partnership is focused on providing technical expertise to OSTI. OSTI is responsible for developing and implementing scientific techniques into NWS operations to improve weather and environmental forecasts and services. OSTI provides support to NWS field forecast offices, National Centers for Environmental Prediction (NCEP), and external customers nationwide.

OSTI and CIRA have become Cloud leaders within the NWS through the implementation of the Virtual Lab (VLab) Cloud. The partnership has focused on utilizing Cloud technologies and tools leveraging Amazon Web Services (AWS) to solve development, testing, and training workflows for the STI Portfolio. These workflows focus on streamlining research to operations and include many aspects such as configuration management, development applications, and promoting DevOps. Research staff investigate these areas and prototype promising technologies. Within the VLab Cloud environment OSTI and CIRA currently support a wide range of clients (e.g., AWIPS Program, Warning Decision Training Division, Operations Proving Ground, Storm Prediction Center, NCEP EMC, STI Modeling, etc.), where we provide onboarding, administration, operations, maintenance, security, and cost support.

The individual in this position will report to the project Programmer/Analyst and serve as a cloud security analyst on the VLab and VLab Cloud projects. Specifically the individual in this position will work with NWS staff and contractors to:

- ensure that VLab services and projects running on the VLab Cloud platform are in compliance with IT; security best practices and government IT security regulations;
- assist with security event forensics and root-cause analyses;
- explore and implement IT security best practices related to cloud computing;
- develop automation methods related to IT security and compliance reporting.

This work will include participating in weekly development discussions, and annual in-person meetings which may take place in Silver Spring, MD. We seek a highly motivated, goal-oriented individual, who loves technology and works well within a team as well as individually.

CSU recognizes the importance of supporting its employees as they balance their career, personal and family life, and that employees must be able to recharge, feel protected in their employment, and take the time they need to improve their overall productivity and health. Faculty, Administrative Professional, and other Non-Classified Staff are provided with paid and unpaid leave benefits to support them and their family and enhance financial security. Paid time off accrual rates for full-time employees = 16 hours of annual leave per month and 10 hours of sick leave per month. Employees also receive paid time off for 11 legal holidays, jury duty, and bereavement leave. CSU’s Commitment to Campus offers employees a healthy work-life balance through a wide variety of programs, discounts, and special benefits. This includes Employee Study Privilege (nine free credits per year available through CSU, CSU Global, CSU Online Plus, and University of Northern Colorado), Family Tuition Scholarship Program (50% reduction in tuition), Discounted Veterinary Care, Wellness Membership Discounts, Volunteers in Public Schools Leave Program, Athletic Ticket Discounts, and much
Decision Making Statement:
Decision making depends on the analysis of the user requirements, software architecture constraints, or technical issues involved with each software build and update. The chosen implementation approach may need to be selected from many alternatives. The individual in this highly independent position will work independently and coordinate with VLab and OSTI management and team members through scrums and weekly meetings. The individual in this position will set priorities that correspond to importance and/or urgency of particular upgrades and other work activities.

Essential Job Duties:

IT Security Analysis and Solution Implementation – 70%
- Develop automated techniques for managing configuration and security of cloud systems.
- Ensure that VLab services and projects running on the VLab Cloud platform are in compliance with IT security best practices and government IT security regulations.
- Assist with security event forensics and root-cause analyses.
- Develop automation methods related to IT security and compliance reporting.
- Orchestrate security of OSTI’s Cloud systems.

Documentation and Reporting – 20%
- Document security control implementation statements.
- Complete annual reports documenting the status of existing projects.
- Summarize research results for sponsors and the broader weather community.
- Prepare software documentation in collaboration with other team members.

Leadership – 10%
- Provide knowledge, guidance, expertise, consultation, and training on security as they apply to Cloud infrastructure.
- Work with various teams to help migrate applications to the cloud securely.

Required Qualifications:
In your cover letter, please specifically address EACH required qualification as it relates to your experience. A cover letter that fails to address the required qualifications for this position may not be considered further after review by the search committee.
- Bachelor’s Degree in Computer Science or related technical field of study plus 10 years of practical experience in IT security OR Master’s Degree in Computer Science or related technical field of study plus 5 years of practical experience in IT security OR PhD in Computer Science or related technical field of study plus 2 years of practical experience in IT security.
- Ability to pass a National Agency Check with Inquiries (NACI) Tier 1 federal background check because the position is located inside a federal facility.
- Experience with one of the following cloud platforms: AWS, Google, or Microsoft Azure.
- Experience analyzing projects and recommending/implementing IT security best practices.
- Willingness to adhere to design, coding, and other project conventions.
- Willingness to learn new skills for professional growth within the position.
- High degree of initiative and excellent communication skills.
- Must be reliable, self-motivated, and comfortable working in an agile and creative team environment.
- Must be legally authorized to work in the United States by the start date. CIRA will not sponsor a visa for this position now or in the future.

Preferred Qualifications:
In your cover letter, please specifically address the applicable preferred qualifications for this position. A cover letter that fails to address the preferred qualifications for this position may not be considered further after review by the search committee.
- Experience performing security event forensics and root-cause analyses.
- Vendor-agnostic security certifications (such as CISSP).
- Experience with Infrastructure as Code (IaC) (Terraform and/or CloudFormation)
- Experience with the following AWS services IAM, EC2, EBS, S3, Lambda, CLI, Systems Manager, Config, Security Hub, GuardDuty, Trusted Advisor, Inspector, Firewall Manager and AWS SDK.
- Familiarity with FISMA compliance and FIPS 800-53 security controls.
- Experience with continuous integration (e.g., Jenkins).
- Experience with code review.
- Experience with the software development process.
- Experience with Kubernetes.
- Experience with Linux system administration.
- Experience troubleshooting complicated technical issues.
- Experience supporting and maintaining a highly-available system.
- Experience handling multiple tasks and meeting project deadlines.
- Experience coordinating projects or research between multiple groups or agencies.
- Knowledge of operational meteorology, NWS operations, AWIPS, and NWS users and partners.

**Annual Salary Range:** $120,000 - $150,000 commensurate with experience and qualifications.

**Background Check:**
Colorado State University strives to provide a safe study, work, and living environment for its faculty, staff, volunteers and students. To support this environment and comply with applicable laws and regulations, CSU conducts background checks. The type of background check conducted varies by position and can include, but is not limited to, criminal history, sex offender registry, motor vehicle history, financial history, and/or education verification. Background checks will also be conducted when required by law or contract and when, in the discretion of the University, it is reasonable and prudent to do so.

**Commitment to Diversity and Inclusion:**
Reflecting departmental and institutional values, candidates are expected to have the ability to advance the Department's commitment to diversity and inclusion.

**Application Deadline:**
Applications will be accepted until the position is filled; however, to ensure full consideration applications should be submitted by 11:59 PM MT on September 4, 2023. For full position announcement and to apply, please click “Apply to this Job” at the following website: [https://jobs.colostate.edu/postings/131936](https://jobs.colostate.edu/postings/131936). NOTE: In your cover letter, please specifically address the required and preferred qualifications of this position. A cover letter that fails to address the qualifications of this position may not be further considered after review by the search committee.

Colorado State University is committed to providing an environment that is free from discrimination and harassment based on race, age, creed, color, religion, national origin or ancestry, sex, gender, disability, veteran status, genetic information, sexual orientation, gender identity/expression, or pregnancy in its employment, programs, services and activities, and admissions, and, in certain circumstances, marriage to a co-worker. The University will not discharge or in any other manner discriminate against employees or applicants because they have inquired about, discussed, or disclosed their own pay or the pay of another employee or applicant. Colorado State University is an equal opportunity and equal access institution and affirmative action employer fully committed to achieving a diverse workforce and complies with all Federal and Colorado State laws, regulations, and executive orders regarding non-discrimination and affirmative action. The Office of Equal Opportunity is located in 101 Student Services. The Title IX Coordinator is the Director of the Office of Title IX Programs and Gender Equity, 123 Student Services Building, Fort Collins, CO 80523-0160, (970) 491-1715, titleix@colostate.edu. The Section 504 and ADA Coordinator is the Director of the Office of Equal Opportunity, 101 Student Services Building, Fort Collins, CO 80523-0160, (970) 491-5836, oeo@colostate.edu. The Coordinator for any other forms of misconduct prohibited by the University’s Policy on Discrimination and Harassment is the Vice President for Equity, Equal Opportunity and Title IX, 101 Student Services Building, Fort Collins, Co. 80523-0160, (970) 491-5836, oeo@colostate.edu. Any person may report sex discrimination under Title IX to the Office of Civil Rights, Department of Education.