☒ Current   ☒ Proposed

Classification Title	Division
Information Technology Specialist III	Data Infrastructure
Working Title	**Office/Unit/Section**
Cloud Architect	Office of Cradle to Career Data
Position Number	**Effective Date**
424-100-1415-002	
Name	**Date Prepared**
	March 11, 2024

General Statement

The Office of Cradle-to-Career Data (C2C) is building a new statewide, longitudinal data system for California. The C2C Data System is bringing together existing data on education and job outcomes from more than a dozen state entities and will make it broadly available through public tools and a data request process. It will provide data-informed tools to help students reach their college and career goals and deliver information on education and workforce outcomes.

This user-friendly system will include resources focused on early learning through K-12 and higher education, as well as on the financial aid and social services that help students reach their goals. It will be a source for actionable data and research on education, economic, and health outcomes for individuals, families, and communities, and provide for expanded access to tools and services that support the navigation of the education-to-employment pipeline.

Under the administrative direction of the Director of Data Infrastructure, the Cloud Architect will be responsible for establishing the infrastructure blueprint of the Cradle-to-Career Data System. The Cloud Architect has an advanced level of understanding and technical expertise to plan, design, build, secure, and test cloud architecture and automate deployments to ensure large volumes of data can be ingested and stored efficiently and securely. They will ensure data is available as a service for data warehouses, digital services, and dashboards. The Cloud Architect will provide direction and assistance to systems analysts, cloud engineers, and other systems architects. They will support the design and development of the cloud data architecture and monitor and report system health and resource consumption to C2C leadership. The Cloud Architect will work closely with external vendors, internal business groups, and C2C management regarding the implementation and operation of the C2C Data System.

Job Functions
Specific Activities: Essential (E) / Marginal (M) Functions

35%   Design and Develop (E)
- Leads the design and development of cloud architecture across multiple environments in Amazon Web Services (AWS) and SaaS products using industry best practices.
- Ensures data moves securely and performantly to enable data for consumption by services. Analyzes data workflow throughput, issues, and other metrics to inform and implement improvements to the automation platform.
- Leads the implementation of continuous integration and continuous delivery (CI/CD) strategy, including instrumenting robust monitoring, altering, and recovery.

30%   Maintenance and Operation (E)
- Leads maintenance and operation of the Data System and infrastructure design. Reviews performance and security reports, addresses issues with performance and security, and communicates findings to management.
- Maintains documentation of the Data System including system architecture, configuration documentation, change management, capacity planning, security artifacts.

20%   Collaborate and Support (E)
- Oversees cloud architecture work of external consultants to ensure alignment with business needs and stakeholders.
- Collaborates with Data Infrastructure team members to guide and implement architectural improvements to cloud infrastructure.
- Collaborates with other architects, security professionals, and engineers to design innovative solutions to keep the Data System infrastructure up to date and secure in accordance with the NIST 800-53 Rev 5 and Cloud Security Alliance (CSA) Cloud controls matrix security frameworks.

10%   Share and Consult (E)
- Conducts presentations to share documented patterns and best practices utilized by the Data System through a variety of forums including communities of practice.
- Advises on cloud architecture requirements and needs as part of project solicitation, vetting, and scoping processes.
- Maintains and improves knowledge of emerging technologies for various cloud environments, identity management solutions, master data management technologies, visualization tools, and state accessibility requirements.

5%   Marginal Functions (M)
- Performs a variety of administrative activities that provide efficiencies to C2C and the Data Infrastructure team. Duties include, but are not limited to, the following: workload management and participation in special ad hoc committees, staff meetings, teams and projects, time reporting and procurements. Prepares correspondence, reports, and issue papers related to data and software, hardware, and the C2C Data System.

Supervision Received

The Cloud Architect reports directly to and receives most assignments from the Director of Data Infrastructure; however, direction may also come from the Principal Data Architect or Chief Information Security Officer.

Supervision Exercised

The Cloud Architect will not exercise any formal supervision; however, they will provide technical and project management leadership to teams within the department as well as external stakeholders. They may have defined responsibility and authority for decision making related to projects, or serve in an expert advisory function.

Working Conditions

The duties of this position are performed indoors. The employee's workstation is located at 400 R Street, Sacramento, CA 95811 and is equipped with standard or ergonomic office equipment, as appropriate. Travel may be required to attend meetings or training classes. The C2C team is remote-centric and a hybrid schedule is acceptable, provided they can be available for frequent, regular in-person meetings in Sacramento.

Attendance

Must maintain regular and acceptable attendance at such a level as is determined at the Department's sole discretion. Must be regularly available and willing to work the hours the Department determines are necessary or desirable to meet its business needs.

Desirable Qualifications

- Current AWS Certified Solutions Architect – Professional
- Current AWS Certified DevOps Engineer – Professional
- Experience integrating disparate data systems, preferably those housing educational data
- Experience designing and implementing CI/CD pipelines
- Experience designing and implementing cloud-based data warehouse solutions (e.g., Snowflake)
- Experience designing and implementing Master Data Management (MDM) solutions (e.g., Tamr)
- Experience designing and implementing industry standard Identity and Access Management (IAM) solutions (e.g., Ping Identity)
- Experience monitoring systems stability and performance and ensure system availability, reliability, and usability
- Experience managing agile teams of professionals and effectively coaching them to achieve high performance
- Experience planning and managing strategic projects, and being accountable for results

Background Checks and Clearance

The successful candidate will be required to pass a criminal background check (see Education Code 10873).

I have read and understand the duties listed above and I can perform these duties with or without reasonable accommodation. * (If you believe reasonable accommodation is necessary, discuss your concerns with the hiring supervisor. If unsure of a need for reasonable accommodation, inform the hiring supervisor, who will discuss your concerns with the RA Coordinator.)

*A reasonable accommodation is any modification or adjustment made to a job, work environment, or employment practice or process that enables an individual with a disability or medical condition to perform the essential functions of their job or to enjoy an equal employment opportunity.

Employee Signature	Employee Printed Name	Date

Duties of this position are subject to change and may be revised as needed or required.

I have discussed the duties of this position with and have provided a copy of this duty statement to the employee named above.

Supervisor Signature	Supervisor Printed Name	Date