

Job Description

Directorate:	Resources		
Service:	Digital User Experience		
Location:	County Hall		
Salary range:	Grade 11	Grade:	11
Reports to:	Data Manager	Staff responsible for:	Senior Engineers

Job purpose and scope

The Principal Data Engineer will be accountable for designing, developing, and implementing integration solutions that connect various systems using cloud technologies such as Azure APIM and Logic apps, and data within LCC and between partner organisations. This role involves enabling data exchange across systems, ensuring scalable and secure integration patterns, adhering to the target operating model for data as defined by the council's data architect, it supports the organisation's ambitions to leverage data to improve services, enhance decision-making, and drive innovation. This role is critical in modernising our data architecture, supporting analytics, automation, and digital services.

This role requires a deep understanding of integration technologies, excellent problem-solving skills, and the ability to work collaboratively with cross-functional teams. It involves engaging in multiple disciplines such as software development, DevOps, and data engineering.

The Principal Data Engineer will manage the Integration and data engineers, align practices with the data strategy, support the implementation of a new data model, and oversee data flow and integration processes and programmes.

Performance Indicators

- Quality of advice/service against legal, safety and best practice standards
- Achievement of relevant service targets
- Adherence to internal/external quality standards if applicable
- Adherence to policies and procedures
- Accuracy and timeliness of information recording and processing
- Customer and stakeholder feedback
- Leading Lancashire Framework

Accountabilities/Responsibilities

- Lead and mentor a team of integration and data engineers, promoting best practices and continuous improvement, ensuring alignment with organisational objectives and best practices.
- Lead the design and development of integration solutions using industry-standard tools and technologies, such as Azure API Management and Logic Apps.
- Lead the design and development of data pipelines and ETL processes to ingest, transform, and deliver data using Azure Synapse Analytics and Data Lakes, enabling the safe use of Power BI.

- Lead the development of SQL queries and stored procedures to support data transformation, loading, and analytics.
- Build and maintain secure, scalable APIs and workflow-based integrations
- Collaborate with the data architect, business analysts, application analysts, and other stakeholders to gather requirements and define integration specifications.
- Implement integration solutions that ensure seamless data flow between systems and applications.
- Troubleshoot and resolve integration issues in a timely manner.
- Perform system testing and validation to ensure the quality and reliability of integration solutions.
- Maintain and update integration documentation and technical specifications.
- Provide technical support and guidance to integration engineers.
- Stay up to date with the latest integration technologies and best practices.
- Support the data strategy by aligning integration practices with LCC Enterprise Architecture and Data Strategy objectives.
- Implement and manage cloud-based integration solutions (e.g., AWS, Azure).
- Manage the Integration Engineers and provide leadership, mentorship, and oversight to ensure alignment with LCC Enterprise Architecture, Data Strategy and best practice.
- Contribute to the delivery of the LCC data strategy and the implementation of a new data model.
- Embed a DevOps approach to data management, ensuring continuous integration, continuous delivery (CI/CD), and automation of data processes.
- Collaborate closely with the DBA Engineering Team to ensure seamless data flow and integration processes across systems. This includes working with the DBA Lead Officer and DBA Engineers to align integration practices with database management practices and support the implementation of the new data model.

Due to the changing nature of the business, this job description serves as a framework to outline the main areas of responsibility. It is not intended to be either prescriptive or exhaustive and will inevitably change. You are expected to be flexible and may be required to operate in different areas of work/carry out different duties as required.

Other

- **Equal Opportunities**
We are committed to achieving equal opportunities in the way we deliver services to the community and in our employment arrangements. We expect all employees to understand and promote this policy in their work.
- **Health and safety**
All employees have a responsibility for their own health and safety and that of others when carrying out their duties and must help us to apply our general statement of health and safety policy.
- **Customer Focused**
We put our customers' needs and expectations at the heart of all that we do. We expect our employees to have a full understanding of those needs and expectations so that we can provide high quality, appropriate services at all times.
- **Safeguarding Commitment**

We are committed to protecting and promoting the welfare of children, young people and vulnerable adults.

- **Skills Pledge**

We are committed to developing the skills of our workforce. All employees will be supported to work towards a level 2 qualification in literacy and numeracy if they do not have one already.

Our Values

We expect all our employees to demonstrate and promote our values:

- **Supportive**

We are supportive of our customers and colleagues, recognising their contributions and making the best of their strengths to enable our communities to flourish.

- **Innovative**

We deliver the best services we possibly can, always looking for creative ways to do things better, putting the customer at the heart of our thinking, and being ambitious and focused on how we can deliver the best services now and in the future.

- **Respectful**

We treat colleagues, customers and partners with respect, listening to their views, empathising and valuing their diverse needs and perspectives, to be fair, open and honest in all that we do.

- **Collaborative**

We listen to, engage with, learn from and work with colleagues, partners and customers to help achieve the best outcomes for everyone.

Person Specification

All the following requirements are essential unless otherwise indicated by *

Your ability to meet the job requirements will initially be assessed by the information provided on your application but further assessment will be undertaken at interview and, in some cases, by using other types of assessment(s).

Qualifications

- Professional and/or academic level qualification (e.g. degree in Computer Science, Information Technology, or a related field) or equivalent, OR
- Substantial vocational experience in a relevant technical, scientific, specialised or operational field
- Proficiency and qualifications in integration technologies such as REST, SOAP, XML, JSON, and API management*

Experience

- Strong experience of integration platforms such as Azure APIM or similar.
- Strong experience of data platform such as Azure Synapse, Data Lakes
- Experience with cloud-based integration solutions (e.g., AWS, Azure).
- Experience in embedding a DevOps approach to development, including CI/CD and automation.
- Strong experience of software development, data engineering and API Management
- Experience of SQL including the ability to write and optimise stored procedures, view and queries in T-SQL
- Excellent problem-solving and analytical skills.
- Strong communication and interpersonal skills.
- Proven experience in designing and implementing integration solutions.
- Strong technical skills in integration technologies and platforms.
- Ability to troubleshoot and resolve complex integration issues.
- Excellent communication skills, both written and verbal.
- Strong attention to detail and a commitment to quality.
- Ability to work effectively in a fast-paced and dynamic environment.
- Strong organizational and time management skills.
- Ability to mentor and guide junior team members.
- Commitment to equality and diversity.
- Commitment to health and safety.
- Experience in managing and mentoring junior engineers, specifically Grade 10 Senior Integration and Senior Data Engineers.
- Experience in contributing to the delivery of data strategies and the implementation of new data models.
- Experience of designing by security

Essential knowledge, skills & abilities

- Experience with Agile development methodologies.
- Knowledge of DevOps practices and tools.

- Certification in integration technologies or platforms (e.g., Azure Certified Developer).
- Experience with data integration and ETL processes.
- Experience of C# or similar language
- Experience of software design principles
- Experience of T-SQL

Other essential requirements

- Commitment to equality and diversity.
- Commitment to health and safety.
- Display the LCC values and behaviours at all times and actively promote them in others.

Out of hours / standby requirement

As part of Digital Services ongoing efforts to ensure smooth operations and timely support, there is an out of hours standby/call out rota in operation. This is to ensure the service can maintain high service levels and address any urgent issues that may arise outside of regular working hours.

This requirement is a feature of this position and, therefore, you may be required to take part in the standby rota on a rotating basis.

While on standby, you would be expected to be available to respond to urgent matters. This may include addressing critical issues, providing support, or coordinating with other team members as needed.

Employees on standby will receive appropriate compensation in accordance with the council's payable enhancements scheme.