THE UNIVERSITY OF MANCHESTER

PARTICULARS OF APPOINTMENT

PROFESSIONAL SERVICES

DIRECTORATE OF IT SERVICES

INTEGRATION ENGINEER

VACANCY REF: PSX-031230

Salary:	UoM Grade 6 £37,694 to £46,049, per annum depending on relevant experience
Hours:	Full time
Duration:	Permanent
Location:	Oxford Road, Manchester

Enquiries about the vacancy, shortlisting and interviews:
Name: IT Resource Management Team
Email: it.resource@manchester.ac.uk

Overall purpose of the job
The Integration team within IT Services are responsible for the application development and application maintenance of our core integration technologies – primarily Boomi, Oracle Integrations, Microsoft SSIS and SoftwareAG webMethods. The Integration team is responsible for over 800 integration jobs maintaining data links between our core, internal and external systems. The University is implementing a new integration/middleware environment called Boomi.

The Integration Engineer is responsible for designing, building and maintaining integration solutions that connect key University systems and services. They implement integration patterns, develop APIs and ensure secure, reliable data exchange across academic, research and administrative platforms. The postholder will be critical to delivering robust technical solutions, troubleshooting integration issues and contributing to the University's digital transformation.

Key responsibilities, accountabilities and duties
Integration development

- Designs, builds and maintains integration solutions using appropriate modelling techniques following agreed architectures, design standards, patterns and methodology.

- Contributes to detailed design specification to form the basis for construction of systems, including for example: physical data flows, class and sequence diagrams, database schemas, file layouts, common routines and utilities, program specifications or prototypes, and backup, recovery and restart procedures.
- Participates in code reviews; adheres to best practices. Ensures that the system design balances functional and non-functional requirements. Makes recommendations and assesses and manages associated risks.
- Develops and manages APIs, connectors and workflows using approved integration tools and frameworks.

Modelling and testing

- Working with data analysts, data engineers and other IT colleagues where appropriate, produces or updates system object/data models and process models and correlates these with business models.
- Working with more experienced Integration Engineers, models, simulates or prototypes the behaviour of proposed integration components.
- Executes test plans and test cases to verify successful end-to-end operation of the completed systems.

Service and security assurance

- Diagnoses and resolves integration issues, ensuring minimal disruption to services.
- Monitors and optimises integration and performance and reliability to maintain high availability and performance of integration services.
- Ensures integrations meet security, compliance, and performance standards through testing and documentation.
- Contributes to development of integration design policies and standards and selection of architecture components.
- Ensures all work is documented using the appropriate standards, methods and tools, including prototyping tools where appropriate.
- Stays current with emerging integration technologies and makes recommendations where appropriate.

IT Services responsibilities, accountabilities and duties

- You will be expected to demonstrate a commitment to the IT Services Practice Charter and the University's values. The University of Manchester values a diverse workforce and welcomes applications from all sections of the community.

- You may from time to time be required to undertake other duties of a similar nature as reasonably required by your line manager.

Person specification

Experience/education/qualification background:	• Integration engineering experience and support of mission-critical integrations at

	enterprise scale (e.g. high availability, high data volumes, sensitive data, etc.). • Good Knowledge of integration patterns: publish/subscribe, event-driven, request/response, batch/ETL, file-based, API-led, orchestration vs choreography. • Experience of working with RESTful APIs (OpenAPI/Swagger), GraphQL (desirable), and SOAP (legacy interoperability). • Experience with API gateways (e.g., Azure API Management, Kong, Apigee) and service meshes (e.g., Istio/Linkerd—desirable). • Knowledgeable about middleware/iPaaS/ESB platforms (e.g., Dell Boomi, Microsoft SSIS, SoftwareAG webMethods, etc.). • Knowledge of data modelling (relational/NoSQL), schema versioning, contract testing (e.g., Pact). • Understanding of end-to-end security in integrations: OAuth2/OIDC, SAML, mTLS, key rotation, secrets management (e.g., Key Vault). **Desirable qualifications**: Integration/iPaaS vendor certifications (e.g. Boomi); ISO 27001 awareness; ITIL V4

Competency (Professional, technical or behavioural)	Level	Essential	Desirable
Middleware: Software which forms part of the operating platform infrastructure.	Proficient in	X	•
Design principles: Principles and practice of good sustainable, secure, maintainable, and efficient system or service design — together with standard industry design approaches. Understanding the importance of adhering to design principles during infrastructure, systems, or service development, considering all relevant non-functional requirements to ensure a quality outcome.	Proficient in	X	•

Application systems: Technical or functional understanding of commercial off-the-shelf (COTS) applications and/or other bespoke software deployed in the organisation in order to provide system configuration, audit, technical and/or functional support.	Familiar with	X	•
Database software: software that enables the user to capture, create, populate and manipulate data structures and where appropriate unstructured data.	Familiar with	X	•
Proof of concept and prototyping: Performing a proof of concept or prototyping exercise to demonstrate or evaluate the feasibility and potential benefits of applying a particular technological business change in order to meet a business need.	Familiar with	X	