

Context of the Software Development Engineer

Our Vision is: *“Exceptional environments that enable talented and creative minds to grow”*

Falmouth Exeter Plus manages and delivers services at Falmouth, Penryn and Truro Campuses on behalf of Falmouth University and the University of Exeter. Working with the Falmouth & Exeter Students' Union (FXU) and the wider, universities partnership, we support Higher Education learning and living and ensure that the interests of all campus users are at the heart of everything we do.

In support of that vision, the IT & Digital mission is to *“Drive Innovation and Deliver Trusted Technology”*. As a Directorate we continually strive to do this through the provision of a wide range of IT and Digital Services to our customers. We support over 10,000 users with over 20,000 connected devices across the Cornwall and the world.

Working as a strategic partner to our customers we provide a source of challenge and innovation bringing positive digital disruption to; learning, teaching and research in support our customers missions in Cornwall.

Business Applications and Integration section are a DevOps team consisting of application specialists, software developers and a database administrator. Responsible for the support and maintenance of the enterprise applications, implementation and administration of databases and the development of integrations using a variety of technologies. The team is customer facing, with regular engagement with system owners to coordinate support and upgrades along with gathering business requirements for integration development.

The Business Applications and Integration section supports a wide range of business-critical applications, system integrations and associated databases. The Microsoft technology stack is at the heart of the application architecture with SQL Server databases at the core. A range of associated integration technologies such as SQL Server Integration Services, .Net Development (C#, MVC and Entity Framework) and PowerShell featuring heavily in facilitating system connectivity.

The main applications operate on a VMWare virtual server environment with the supporting databases configured in a resilient high-availability group architecture operating multiple clusters and multiple SQL Server instances. Our “Cloud First” strategy is driving increasing engagement with and adoption of cloud-based applications which is, in turn, promoting the use of Cloud Integration technologies and middleware tools.

Overall purpose of the Software Development Engineer

The Software Development Engineer will work members of the Business Applications and Integration section, Service Delivery section and our customers to ensure that integrations between business applications and the main data warehouse are developed in a secure, timely and reliable manner.

Working with the Software Development Specialists to implement a range of system integrations, diagnostic applications and reports to meet the customer requirements and that comply with the coding standards and practices.

Responsibilities include ensuring that appropriate levels of development and integration testing, user acceptance testing, and data validation are undertaken as part of the implementation process. The use of automated testing techniques, such as Unit testing, will be incorporated in implementations where appropriate.

Main Duties

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- Development of integrations between business applications and the main data warehouse, complying with established coding practices and standards
- Gather requirements and design secure systems integrations to fit the customers' needs
- Following Specialist direction, deploy and operate built and tested technology solutions in accordance within change and release management processes
- Prepare change requests, present to the Change Advisory Board for approval and co-ordinate the implementation of those approved
- Undertake regular, documented maintenance and patching activities for the roles technical area
- Manage unit and user acceptance testing to ensure that delivered integrations meet the requirements of the customer
- Prepares technical articles to assist other team members in providing a consistent and repeatable customer support experience
- Undertake actions to alleviate and recover from a major incident as directed by the Incident Manager
- Contribute to the future architectural standards across the areas of technical responsibility and participates in the delivery of aligned technical projects.
- Accept, record and resolve incidents and requests assigned to the team queues in a timely manner and within Operational and Service Levels Targets
- Monitors assigned support queues and resolves incidents and service requests assigned within the Service Level Agreement, re-assigning if needed within Operational Level Targets
- Troubleshoot technical problems and incidents, recommending changes to technical designs, implement agreed workarounds and fixes, as required, to maintain a stable environment
- Identify end-user training requirements, creating supporting materials which will ensure that user adoption is smooth and early life support is minimised
- Be prepared to work irregular hours to support the needs of the service and its customers

General Duties

- Contributes to delivering an IT and Digital service to fit the needs of a Higher Educational Institution with due respect to the diverse nature of the learning environment and national initiatives.
- Is vigilant with regards to digital security and leads by example by understanding the threats, identifying vulnerabilities and reporting anything which could damage the reputation and systems of the universities.
- Maintains good records, documenting actions in appropriate systems.
- Embraces the principles and concepts of the frameworks and standards adopted by IT & Digital. These include ITIL, PRINCE2, MoP and ISO20000.
- Delivers a level of customer service which meets and exceeds the expected standards. Ensures all people are dealt with efficiently and with appropriate regard to their needs.
- Undertakes reasonable duties which contribute to the success of the directorate and FX Plus as a whole.
- Agrees personal and team objectives and works to achieve them, developing both individually and collectively.
- Actively participates in required organisational processes, courses and activities, constantly maintaining the required conduct.
- Support and contribute to keeping FX Plus, Falmouth University and the University of Exeter compliant with all legislation and adopted standards. Specific attention should be given to Health and Safety, Equality, Diversity and Safeguarding.

Skills required for the role

IT and Digital roles at FX Plus have been mapped to the industry good practice Skills Framework for the Information Age Version 6 (SFIA). For more information see <http://www.sfia-online.org/en>.

Skill (Level)	Skill Description	How we may assess
Technical specialism (Level 4)	Maintains knowledge of specific specialisms, provides detailed advice regarding their application and executes specialised tasks. The specialism can be any area of information or communication technology, technique, method, product or application area.	Application; Interview; Assessment
Emerging technology monitoring (Level 4)	Maintains awareness of opportunities provided by new technology to address challenges or to enable new ways of working. Within own sphere of influence, works to further organisational goals, by the study and use of emerging technologies and products. Contributes to briefings and presentations about their relevance and potential value to the organisation.	Application; Interview; Assessment
Data management (Level 3)	Applies ethical and robust techniques in the transformation of data from one format/medium to another, in line with organisational policies and procedures and being sensitive to risks around the use of information.	Application; Interview; Assessment
Systems design (Level 3)	Specifies user/system interfaces and translates logical designs into physical designs taking account of target environment, performance security requirements and existing systems. Produces detailed designs and documents all work using required standards, methods and tools, including prototyping tools where appropriate.	Application; Interview; Assessment
Database design (Level 4)	Develops and maintains specialist knowledge of database concepts, object and data modelling techniques and design principles and a detailed knowledge of database architectures, software and facilities. Analyses data requirements to establish, modify or maintain object/data models. Evaluates potential solutions, demonstrating, installing and commissioning selected products.	Application; Interview; Assessment
Programming/software development (Level 4)	Designs, codes, tests, corrects and documents complex programs and scripts from agreed specifications, and subsequent iterations, using agreed standards and tools, to achieve a well-engineered result. Takes part in reviews of own work and leads reviews of colleagues' work.	Application; Interview; Assessment
Testing (Level 3)	Reviews requirements and specifications and defines test conditions. Designs test cases and test scripts under own direction, mapping back to pre-determined criteria, recording and reporting outcomes. Analyses and reports test activities and results. Identifies and reports issues and risks associated with own work.	Application; Interview; Assessment
Systems integration (Level 4)	Defines the integration build, accepts software modules from software developers, and produces software builds for loading onto the target environment. Configures the hardware environment, produces integration test specifications, and conducts tests, recording details of any failures and carrying out fault diagnosis.	Application; Interview; Assessment
Change management (Level 4)	Assesses, analyses, develops, documents and implements changes based on requests for change.	Application; Interview; Assessment
Release and	Assesses and analyses release components. Provides input to	Application;

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Skill (Level)	Skill Description	How we may assess
deployment (Level 4)	scheduling. Carries out the builds and tests in coordination with testers and component specialists maintaining and administering the tools and methods – manual or automatic - and ensuring, where possible, information exchange with configuration management. Ensures release processes and procedures are maintained.	Interview; Assessment
Application support (Level 4)	Maintains application support processes, and checks that all requests for support are dealt with according to agreed procedures. Uses application management software and tools to investigate issues, collect performance statistics and create reports.	Application; Interview; Assessment
Problem management (Level 3)	Investigates problems in systems, processes and services. Assists with the implementation of agreed remedies and preventative measures.	Application; Interview; Assessment
Relationship management (Level 4)	Implements stakeholder engagement/ communications plans, including, for example; handling of complaints; problems and issues; managing resolutions; corrective actions and lessons learned; collection and dissemination of relevant information. Uses feedback from customers and stakeholders to help measure effectiveness of stakeholder management. Helps develop and enhance customer and stakeholder relationships.	Application; Interview; Assessment

Person Specification

Importance	Personal attribute description	How we may assess
Qualifications & Certifications		
Essential	A Higher Educational qualification in an applicable subject or equivalent relevant experience	Application
Desirable	ITIL® Foundation certification	Application; Interview
Desirable	Formal associate certification from Microsoft in a role-appropriate subject	Application
Desirable	ITIL® Lifecycle or Capability modules certification	Application; Interview
Knowledge, Experience and Skills		
Essential	Experience of working in a technical support environment, exhibiting an appropriate breadth and depth of technical knowledge	Application
Essential	Experience of drafting and reviewing technical documentation	Application
Essential	Experience supporting and maintaining many of the technologies relevant to this role	Application
Essential	Understanding of IT and digital systems and their vulnerabilities	Interview
Essential	Experience with development frameworks, e.g. C#, .net, HTML5, CSS, Visual Studio	Application
Essential	Experience with Microsoft SQL Server integrations and reporting services, from design to operation	Application

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Importance	Personal attribute description	How we may assess
Essential	Experience of testing including automated testing, developer testing and user acceptance testing.	Application
Essential	Experience of working in a support environment with a professional, customer-orientated approach to service delivery	Application
Essential	Experience of system integration using file transfer, web services, database ETL	Application
Essential	Good verbal and written communication skills, being able to converse with technical and non-technical individuals	Interview; Probation
Essential	Good problem-solving skills, taking a proactive, pragmatic, and positive approach to finding workable solutions and alternatives	Assessment; Probation
Essential	Ability to work effectively with a range of different stakeholders, internally and externally	Reference; Probation
Essential	Understanding of ideas and principles underpinning Service Knowledge Management Systems (SKMS)	Interview; Assessment
Desirable	Performing business application updates and patching in accordance with patch compliance policy and in a change management environment	Application
Desirable	Experience as an advisory or technical resource to a project	Application
Desirable	Some experience in business analysis.	Application
Desirable	Experience of Automated testing (e.g. Nunit)	Application
Desirable	Experience with Content Management Systems	Application
Personal Behaviours		
Essential	Respectful: Thinks of others before speaking or acting. Treats all persons equitably, fairly and justly, exhibiting good manners. Modifies style to fit the audience, interpreting difficult subjects to be understood by all.	Application; Interview; Probation
Essential	Cooperative: Develops and maintains good working relationships across the organisation and beyond. Approachable, good-natured, and easy to talk to, using various methods and tools to communicate effectively. Helps others to do or believe something, regardless of their level in the organisation.	Probation
Essential	Flexible: Creatively identifies and creates better ways of working. Thrives in an environment of change, being adaptable and open to; ideas, advice and guidance. Blends creative, problem-solving, and technical skills to develop new approaches. Seeks new opportunities both personally and organisationally.	Interview; Probation
Essential	Quality-focused: Strives for continuous personal and professional development. Always considers how to improve things. Confident in challenging existing work practices and driving improvement. Takes the time to do things right being thorough and following policy, process and procedure.	Application; Interview; Probation
Essential	Honest: Open and truthful whilst respecting confidentiality. Remains composed under pressure, using clear and sound reasoning to justify actions. Provides clear, calm and useful feedback to all levels of the organisation.	Interview; Probation

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Importance	Personal attribute description	How we may assess
Essential	Organised: Deals with workload efficiently. Confidently plans, delegates and delivers what is required, using available resources effectively. Maintains good records, complying with established systems and processes.	Application; Probation