

Job Related Information

This document includes information about the role for which you are applying and the information you will need to provide with your application.

1. Role Details

Vacancy reference	14480
Job title:	Systems and Network Administrator supporting IoC infrastructure
Reports to:	Systems Manager
Salary:	Ranging from £32,548 to £38,833
Terms and conditions:	Academic-Related Staff
Grade	GR7
Duration of post:	Temporary contract until March 2021
Working hours:	Full time (37 hours per week), Monday to Friday
Location:	Milton Keynes
Closing date:	12 noon, Thursday 29 March 2018
Type of application form accepted:	Short version (with CV plus covering letter)
Number of referees required:	Three
Unit recruitment contact:	Ortenz Rose

2. Summary of duties



The Institute of Coding (IoC) www.instituteofcoding.org is a new, exciting, national initiative, led by the University of Bath, supported by theme leaders Aston University, Coventry University, the Open University and Queen Mary University of London. The Institute brings together a range of universities, industry, training providers and professional bodies to address the UK's digital skills gaps.

The Institute's vision is to enhance the education and employability of every IoC learner, and ensure that employers and individuals across the UK can access the skills they need to compete in the global digital economy. This unique and innovative collaboration has been made possible with £20m from the Higher Education Funding Council for England and match funding from universities and industry partners.

The Institute of Coding will develop and deliver innovative, industry-focused higher education across the UK. It will develop accredited degree schemes and short courses aimed at professionals in a wide range of sectors, as well as working to widen the participation of women, returners to work and hard to reach groups.

The Open University leads the IoC's first theme on university learning, which aims to influence computer science teaching in universities nationally. An important part of that theme will be collaboration with a number of IoC partners and industry representing employers and educators to create an IoC Industrial Accreditation standard that will connect students and employers in new ways, using blockchain based accreditation and learner records, with the aim of:

- Increasing learner employability;
- Decreasing the skills gap in key technical and non-technical areas associated with computing in industry;
- Decreasing hiring costs for employers.

This IoC blockchain learning verification work will build on the work of the Knowledge Media Institute at the Open University (KMi) who have built up an active research and development group focusing on blockchain and distributed ledger technologies. Members of KMi are working on the use of blockchains to create a trustable, decentralised repository for educational certification, ePortfolios and datasets with privacy concerns or which could be subject to tampering. We are also working on connecting blockchains with Linked Data. See more details at <http://blockchain.open.ac.uk/>

Central to the project is the creation of a state-of-the-art 'Blockchain infrastructure' which will be used to support for the IoC accreditation standard.

We are currently looking for a Systems and Network Administrator for the IoC infrastructure.

The appointment will be made on the Grade 7 salary scales for Academic-Related Staff. Salary will be determined on qualification and experience.

JOB DESCRIPTION

The role requires the appointee to be part of the KMi team providing Linux, Windows, Networking and Virtualisation infrastructure support.

Reporting to the Systems Manager you will be expected to operate as part of the Systems team as well as being given individual tasks and responsibilities. This can result in the need to cover the tasks of other team members. You will be expected to document common systems-based procedures to ensure smooth operating of the team in the event of absence.

Your work will involve:

Engineering and Provisioning

- Engineering of system administration related solutions for the various project and operational needs.
- Install new/rebuild existing servers and configure hardware, peripherals, services, settings, directories, storage, etc. in accordance with standards and project/operational requirements.
- Install and configure support systems for the server and storage virtualisation infrastructure applications or backup systems.
- Develop and maintain installation and configuration procedures.
- Contribute to and maintain system standards.
- Research and recommend innovative, and where possible automated approaches for system administration tasks. Identify approaches that leverage our resources and provide economies of scale.

Operations and Support

- Perform daily system monitoring, verifying the integrity and availability of all hardware, server resources, systems and key processes, reviewing system and application logs, and verifying completion of scheduled jobs such as backups.
- Perform proactive testing of core infrastructure facilities, identifying potential weaknesses upwards to the Systems Manager.
- Perform regular security monitoring to identify any possible intrusions.
- Perform daily backup operations, ensuring all required file systems and system data are successfully backed up to the appropriate media.
- Perform regular file archival and purge as necessary.
- Create, change, and delete user accounts per request.
- Repair and recover from hardware or software failures. Diagnose the problem, repair as a matter of urgency.
- Reporting faults onwards to relevant hardware and/or software maintenance agreement providers, liaising with engineers that may need to visit the site.
- Coordinate and communicate with impacted users, relay information to the user community, e.g. about downtime of core systems due to maintenance and/or faults.

Maintenance

- Apply OS patches and upgrades on a regular basis, and upgrade administrative tools and utilities. Configure / add new services as necessary.
- Upgrade and configure system software for the server and storage virtualisation infrastructure applications or backup systems.
- Ensure upgrades are arranged to take place during NARP (Network at risk periods) communicating potential downtime to effected parties.
- Maintain operational, configuration, or other procedures.
- Perform periodic performance reporting to support capacity planning.
- Perform ongoing performance tuning, hardware upgrades, and resource optimization as required. Configure CPU, memory, and disk partitions as required.
- Maintain data centre environmental and monitoring equipment.
- Conduct routine storage tasks via iSCSI and Fibre Channel fabrics (mapping, un-mapping, increasing and decreasing storage volumes).

- Conduct routine server and application security audits using enterprise tools in addition to manual scrutiny and reporting of issues to the Systems Manager.

Communication with IT Technical services

- Regularly attend meetings scheduled by local IT Technical services, to ensure smooth communication with Open University support teams.
- Relay information relevant to the IoC user community about potential downtime due to central services outages.
- Liaise with local IT technical services network development teams with respect to network issues such as firewall changes and other issues related to the University's network resources.

Maintain leading edge professional skills

- Continually develop and maintain competencies of own systems infrastructure skills, particularly in areas of advances systems administration and management.
- Ensure knowledge of the latest operating systems, both Linux and Windows and Storage and server virtualisation platforms.

3. Person specification

Requirements (E = Essential / D = Desirable)

Education, qualifications and training

(E) A Recognised qualification in the area of Systems Administration, or equivalent experience.

Knowledge, work and other relevant experience

Essential:

- Experience in Linux operating systems installation, support and maintenance;
- Experience in Windows server operating system installation, support and maintenance;
- Experience with server hardware support and maintenance;
- Experience working with both server and storage virtualisation platforms;
- Experience with server and application monitoring;
- Experience with enterprise backup solutions;
- Strong evidence of Systems Administration understanding in practical implementation.

Desirable:

- Knowledge of Red Hat Enterprise Linux, Windows Server 2012/2016;
- Knowledge of VMware, Hyper-V and Xen;
- Knowledge of enterprise storage solutions (i.e. SAN, DAS and Hyperconvergence);
- Web server administration experience (Apache/PHP/MySQL);
- Knowledge of working with HP, Dell, IBM and Dothill hardware platforms;
- Experience working in (higher) education;
- Experience administering TCP/IP networks, routing and firewalls;
- Knowledge of Blockchain technologies e.g. Ethereum;
- Experience with server and/or web application vulnerability scanning and threat detection tools.

Personal abilities and qualities

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| Essential: | <ul style="list-style-type: none">• Ability to quickly demonstrate understanding of the project aims and specific tasks as requested;• Ability to work in complex team relationships;• Ability to work to challenging targets and deadlines;• Willingness to undertake tasks as directed;• Excellent written and oral communication skills;• Ability to handle constructive feedback. |
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Desirable:	n/a
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4. Role specific requirements e.g. Shift working

Occasionally there is a requirement to work outside of the 'core' office hours.

5. About the unit/department

Faculty of Science, Technology, Engineering & Mathematics

The Faculty of Science, Technology, Engineering and Mathematics (STEM) is comprised:

- School of Computing & Communications
- School of Environment, Earth & Ecosystem Sciences
- School of Engineering & Innovation
- School of Life, Health & Chemical Sciences
- School of Mathematics & Statistics
- School of Physical Sciences
- Knowledge Media Institute (distinct research institute)
- Deanery including teams supporting Curriculum, Research and Enterprise, Laboratory Infrastructure and Faculty Administration

“We aspire to be world leaders in inclusive, innovative and high impact STEM teaching and research, equipping learners, employers and society with the capabilities to meet tomorrow’s challenges”

The Faculty of STEM consists of 700 staff and 1,800 Associate Lecturers. The Faculty delivers over 185 modules across undergraduate and postgraduate curriculum, supporting nearly 19,000 students (full time equivalents) which is 29% of the OU total.

The Faculty generates more research income (circa £17M) than any other Faculty in the University, supported by a comprehensive laboratory infrastructure.

We are proud of our distinctive values and capabilities underpinning our aspiration:

We are inclusive:

- We transform people’s lives, ensuring STEM education is openly accessible to many thousands of students from diverse backgrounds – our students express high satisfaction with their study experience

- We engage the public in exciting citizen science and engineering, including through free open educational resources, multi-platform broadcasting, outreach to inspire the next generation and with programmes to encourage more women into STEM

We are highly innovative:

- We are at the forefront of innovative developments in teaching practical science and engineering at a distance, through simulated and remote access laboratories and practical experimentation
- Our high quality teaching and curriculum are informed by world-leading research, strong links with professional bodies and communities of practitioners, as well as by scholarship focused on continuously improving our STEM pedagogy

We deliver significant social and economic impact:

- We provide STEM higher education at a scale and reach unsurpassed in the UK, with a sizeable international reach and further growth potential
- We inject transferable STEM skills and knowledge direct into the workplace for immediate employee and employer benefit, as students combine study while working
- The employability value of our courses is underpinned by accreditation from leading STEM Professional Bodies and Learned Societies, as well as partnerships and sponsorship with leading employers
- Our high quality, applied and academically relevant teaching and research addresses real-world issues, delivering impact for industry and society, including addressing pressing STEM skill-shortages across the UK.

The Knowledge Media Institute (KMi) of the UK's Open University is a highly successful interdisciplinary research centre founded at The Open University in 1995, and located in attractive premises at The Open University's main campus in Milton Keynes, UK. We offer a stimulating environment, widely acknowledged to be at the leading edge of research and development, particularly in Semantic Technologies, Human Computer Interaction, New Media and Information Retrieval. The style, impact and content of our work can be seen at <http://kmi.open.ac.uk/>

"Our lab values diversity and is committed to equality of opportunity. We would particularly welcome applications from women, since women are, and have historically been, underrepresented on our academic staff."

6. How to obtain more information about the role or application process

If you would like to discuss the particulars of this role before making an application please contact Paul Alexander on +44 (0)1908 858723 or email: paul.alexander@open.ac.uk

If you have any questions regarding the application process please contact Ortenz Rose on +44 (0)1908 654774 or email: kmi-recruitment@open.ac.uk

7. The application process and where to send completed applications

Your application should contain:

- A completed short application for employment form;
- An up-to-date CV;
- Covering letter detailing how your skills and experience make you a suitable candidate for the post.


Please ensure you complete all relevant sections of the application form.

Applications received without a covering letter will not be accepted.

Please ensure that your application reaches the University by:	12:00 noon, Thursday 29 March 2018
E-mail your application to:	kmi-recruitment@open.ac.uk
Or post it to Name/Job title:	Ortenz Rose / KMi Senior Co-ordinator – Staffing & Recruitment
Department/Unit:	Knowledge Media Institute (STEM)
Address:	The Open University, Berrill Building, Walton Hall, MILTON KEYNES. Bucks MK7 6AA

8. Selection process and date of interview

The interview panel will be chaired by:	Paul Alexander
The other members of the interview panel will be:	Robbie Bays Rachel Yarrien
The interviews will take place on:	To be advised
The selection process for this post will include:	<ul style="list-style-type: none"> • A review of applications by the interview panel; • A formal interview; • A 20 minute exam.

	<p>We will let you know as soon as possible after the closing date whether you have been shortlisted for interview. Further details on the selection process will also be sent to shortlisted candidates.</p> <p>Applications received after the closing date will not be accepted.</p>
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