



## RECRUITMENT PACK

This document includes the following information:

- Job Description
- Person Specification
- Additional information

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### Making an application:

When completing the on-line application form you will be asked to answer questions to help you demonstrate how you meet the requirements of the post. Your answers will be used at the shortlisting and interview stages of the recruitment process. We therefore recommend that you take a copy of this recruitment pack to help with your preparation.

NOTE: You don't have to answer the questions in one attempt, but can save your incomplete application and return to it at another time. You may want to draft your answers using Microsoft Word and then copy your text into the application form. Please be aware that formatting (eg. underline, bold, bulleting) will be lost in this process. If you are using an Apple product you will need to use an alternative web browser to Safari such as Google Chrome.

- Links to Guidance Notes and Frequently Asked Questions can be found on the Search Results page. These pages will open in a new window.
- We recommend that you take a copy of this recruitment pack to help with your preparation.

A commitment to sustaining an inclusive and diverse community is one of the University's Core Values and we are keen to address any imbalances in our workforce.

The University of Essex is proud to be part of the Disability Confident scheme and is committed to supporting diversity and equality, representative of our inclusive community. As part of our commitment to this scheme any candidate who has a disability and meets all the essential criteria for the role will be offered an interview. We also work in partnership with national disability organisation DisabledGo who provide detailed online access guides to many of our campus buildings and facilities which you may find useful.

Please note: We are only accepting on-line applications for this post. However, if you have a disability that makes it difficult for you to provide us with information in this way, please contact the Resourcing Team (01206-874588/873521) for help.

**Closing Date: 03 September 2017**

**Interviews are planned for: 27 September 2017**

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**JOB DESCRIPTION – Job ref REQ00790**

<b>Job Title and Grade:</b>	High Performance Computing (HPC) Coordinator Grade 8
<b>Contract:</b>	Fixed-term until 02 July 2019. Part-time or Full-time. This post is fixed-term to deliver a specific project finite in nature.
<b>Hours:</b>	A notional minimum of 28.8 - 36 hours per week, see general information.
<b>Salary:</b>	£32,004 - £38,183 per annum, pro rata if part-time
<b>Department/Section:</b>	IT Services
<b>Responsible to:</b>	Director of IT Services
<b>Reports on a day to day basis to:</b>	Assistant Director of IT Services (Infrastructure)
<b>Purpose of job:</b>	The development, maintenance and support of the University High Performance Computer/Cluster (HPC) service.

**Duties of the Post:**

The post holder will be the technical and service lead in the development, maintenance and support of a wide range of industry standard, and proprietary HPC tools and technologies that support the reliable, efficient, and secure running of the University HPC service. The HPC Service Coordinator will be expected to work closely with University clients, third party suppliers/consumers and colleagues within the Infrastructure group of IT Services and more widely in IT Services to establish effective and efficient operation of the University HPC solution. As the principal HPC service manager, the post holder will have responsibility for the service performance ensuring availability, capacity, resilience, and security. The post holder will liaise with first and second line support staff to ensure that the incident management, self-service support, and continual improvement is optimal.

The HPC Service Coordinator will play a crucial role through service monitoring and engaging with service users to ensure that the service continues to meet the evolving requirements of academic and research staff of the University.

The post will be responsible for the following:

**STRATEGY AND PLANNING**

1. Contribute to the planning of the University's use of high performance computing (HPC) in support of the University's strategic plan and related strategies.
2. Participate in the discussion and development of ideas to maximise the potential of HPC systems and any related big-data requirements.
3. Remain abreast of technical developments in the field of HPC and advise on any aspects that may impinge on the strategic development of the University's IT systems and services.

**SYSTEMS DEVELOPMENT AND SUPPORT**

4. Maintain the HPC system (and related peripherals) operating to optimal performance and availability including the management of hardware and software upgrades, whilst ensuring maximum uptime and availability for end users.
5. Monitor, record and review system performance statistics to ensure that the system meets business needs and plan for hardware replacement and upgrades of the service.
6. Work with academic and research staff and students in identifying and developing solutions for new or enhanced systems where high-performance computing is required and ensuring that it meets their business requirements.
7. Design, develop and document systems administration procedures, reports and status or integrity checks to ensure the efficient and effective operation of HPC cluster and monitor system performance statistics to ensure that the system meets business needs.



8. Develop and maintain a single unified diagram or model which presents the entire scope and complexity of the University's HPC solution and any associated services in a way which is meaningful to both senior management and technical staff so as to inform future project proposals in respect of essential system interdependencies.
9. Co-ordinate the discussion and development of ideas with academic and other staff to maximise the potential of HPC systems and any related big-data requirements and, subject to approval, to implement new or enhanced services.
10. Proactively seek out areas of operational inefficiency where improved workflows or practices would deliver tangible efficiencies or improvements to customer service and apply continual service improvement and related ITIL processes to improve HPC service delivery.
11. Lead the risk analysis and mitigation for the HPC service and lead relevant business continuity planning including emergency response and recovery.
12. Develop as necessary specific project mandates and/or costed proposals for HPC projects where additional resource is required and formal University approval is required.
13. Work with the Information Assurance Manager, Internal Audit, University Compliance Officers and other IT Services colleagues to ensure that data is held, manipulated, referenced, and transferred by the HPC service in accordance with the University's policies, quality standards, and in compliance with University policies and guidelines as well as information legislation and regulation.
14. Provide routine statistical and related management information relating to the performance of the HPC service and authoring special reports, reviews, and proposals as required.

#### **TEAMWORK AND MOTIVATION**

15. Establish close links with colleagues in IT Services and University client sections/departments to promote and encourage use of the HPC service and foster a collective vision of HPC within the wider University.
16. Work as a member of any project teams that require significant HPC support.

#### **COMMUNICATION AND COLLABORATION**

17. Contribute to the provision of HPC solutions, development, and training for colleagues in IT Services and the wider University as required.
18. Work with the Information Assurance Manager, Internal Audit and other IT Services colleagues to ensure that data is held, referenced, and transferred in accordance with the University's policies, quality standards, and in compliance with information legislation and regulation.
19. Lead on the provision of information, documentation, online materials and training for the HPC service for IT Services colleagues, clients and potential clients.
20. Provide advice and guidance for the IT Services Helpdesk and second line IT support staff to assist in the rapid resolution of issues and problems in using the HPC service.
21. Provide statistical and related management information relating to the performance of HPC solution and authoring routine and special reports as required.
22. Develop and maintain architecture diagrams and/ or models which presents the entire scope and complexity of the University's HPC solution and any associated services in a way which is meaningful to both senior management and technical staff.

#### **INVESTIGATION, ANALYSIS, AND RESEARCH**

23. Identify, analyse and resolve integration related service issues, liaising with first and second line IT support staff and service clients to ensure that timely and appropriate communication with affected service clients is maintained from discovery to resolution.
24. Attend meetings and conferences; participating in UK and international HE and technical or specialist forums, so as to keep abreast of developments, best practice, and standards in HPC solutions, particularly as used in Higher Education.
25. Assist in the preparation of applications for external or internal funding of projects with substantial HPC requirements. Depending on the nature of the project, the post-holder may participate in the work of funded projects.
26. Monitor, analyse and report on integration technology innovations and, where appropriate, formulate recommendations and if necessary project plans for their implementation by the University.



**OTHER**

27. Any other duties as may be assigned from time to time by the Director of IT Services or their nominee.

***These duties are a guide to the work that the post holder will initially be required to undertake. They may be changed from time to time to meet changing circumstances.***

***For Academic posts only:*** It should be noted that there is a contractual requirement for some members of academic staff to undertake research duties. If this requirement applies to a post it will be clearly stated in the job description, which forms part of the contract of employment.

**Terms of Appointment:**

For a full description of the terms of appointment for this post please visit:

<http://www.essex.ac.uk/hr/current-staff/terms.aspx#>

**August 2017**

**Person Specification****JOB TITLE:** High Performance Computing (HPC) Service Coordinator**Qualifications /Training**

	<b>Essential</b>	<b>Desirable</b>
▪ Degree in computational science or engineering or equivalent professional experience.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
▪ PhD in computational research field or equivalent professional experience in an R&D development environment.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Experience/Knowledge**

	<b>Essential</b>	<b>Desirable</b>
▪ Proven Linux system administration and integration skills, preferably relating to HPC clusters (provisioning, schedulers, monitoring, HPC applications and libraries).	<input checked="" type="checkbox"/>	<input type="checkbox"/>
▪ Excellent programming skills in at least on high-level language (e.g. Perl, Python, C++, Java).	<input checked="" type="checkbox"/>	<input type="checkbox"/>
▪ Demonstrable experience in use and configuration of cloud computing system with public (AWS, Azure etc.) or Private (e.g. OpenStack) Cloud computing environments.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
▪ Excellent understanding of networking (Ethernet, TCP/IP, Infiniband etc.).	<input checked="" type="checkbox"/>	<input type="checkbox"/>
▪ Knowledge and experience of implementing Security and Data Protection policies in Cluster Computers, ideally for systems where data protection is a business concern.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
▪ Experience in developing/administering/providing a High Performance Computing infrastructure within an HE setting.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
▪ Experience in development of HPC applications, preferably in data intensive research domains using parallel computing technologies such as MPI, OpenMP, OpenCL or CUDA in either FORTRAN, C/C++ or scripting/domain specific languages.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
▪ Experience working in Higher Education, Research Institute or a commercial R&D organisation.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
▪ Experience of managing storage technologies used in High Performance Computing (e.g. Isilon, Panasas, GPFS, Lustre, Hadoop/HDFS etc) and dealing with performance problems associated with large data sets (processing, migration, archival etc.).	<input type="checkbox"/>	<input checked="" type="checkbox"/>
▪ Knowledge and experience of working in an ITSM/ITIL environment.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
▪ Practical OpenStack administration skills.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Skills/Abilities**

	<b>Essential</b>	<b>Desirable</b>
▪ High attention to detail.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
▪ Ability to analyse and interpret complete data.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
▪ Excellent problem solving skills.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
▪ Ability to travel to campuses based in Southend and Loughton as required.	<input checked="" type="checkbox"/>	
▪ Excellent presentation, communication and inter-personal skills and the ability to communicate advanced technical concepts to non-specialist audiences.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
▪ Deep understanding of parallel I/I in a distributed (grid-like) or tightly coupled (HPC-like) system.	<input type="checkbox"/>	<input checked="" type="checkbox"/>



**Other**

	<b>Essential</b>	<b>Desirable</b>
▪ *Ability to meet the requirements of UK 'right to work' legislation.	☒	

\*The University has a responsibility under the Asylum, Immigration and Nationality Act 2006 to ensure that all employees are eligible to work in the UK. Prior to commencing employment, the successful candidate will be asked to provide documentary evidence to this effect. The University may be able to offer Tier 2 Sponsorship for this role. For further information about UK immigration requirements please follow this link <https://www.gov.uk/government/organisations/uk-visas-and-immigration>

**August 2017**



## **ADDITIONAL INFORMATION**

### **IT Services**

You can find more information about the department at the following link <http://www.essex.ac.uk/it/>

### **General information**

Informal enquiries may be made to Richard Murphy, Director of IT Services (telephone: 01206 873455 e-mail: [rmurphy@essex.ac.uk](mailto:rmurphy@essex.ac.uk)). However, all applications must be made online.

This post can be offered on a part-time or full-time basis. The part-time hours can be offered at a minimum of 0.8 fte or 28.8 hours per week. Please state in your application if you wish to apply for this post on a part-time or full-time basis.

### **People Supporting Strategy**

Please find a link to the People Supporting Strategy.

<http://www.essex.ac.uk/hr/policies/docs/people-oct15.pdf>

### **Benefits**

Our staff and students are members of the University for life. We believe a person's potential is not simply defined by grades or backgrounds, but by a willingness to question, to collaborate and to push at the edges of knowledge and their own potential.

As an employer we offer a range of benefits and a commitment to career development and equal opportunities in an environment that both reflects and creates a rich interaction of people, disciplines and ideas.

- Pension scheme
- Generous holiday entitlement
- Competitive salaries
- Training and development Family Friendly policies
- On campus childcare facilities, for more information visit [www.wivenhoeparkdaynursery.co.uk](http://www.wivenhoeparkdaynursery.co.uk)
- Childcare vouchers
- Relocation package for qualifying staff
- Interest free season ticket loan
- Range of optional salary exchange tax benefits (pension, childcare and bicycle schemes)

### **No smoking policy**

The University has a no smoking policy.