Job Title: Senior Support Analyst (Linux Systems Administration)
Grade: 7
Salary: £34,189 to £39,609 per annum
Department: IT Services
Hours/Contract: Full time, permanent
Reference: 860

Role Purpose
As a Senior Support Analyst you will be responsible for the smooth, efficient and secure operation of all key Linux & Web services provided by IT Services and to participate in projects to introduce or change services.

To apply modern automation tools to service management, developing scripted and human processes and improving and maintaining documentation to meet operational requirements and support service delivery.

The primary focus of this role is on the support and management of Linux services both on an ongoing basis and in response to user requests.

<table>
<thead>
<tr>
<th>Main Duties and Responsibilities</th>
<th>% Time</th>
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<tbody>
<tr>
<td><strong>Day-to-Day Tasks</strong></td>
<td>50%</td>
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<tr>
<td>• Creation of new “LAMP” web server VMs</td>
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<tr>
<td>• Managing capacity in response to user requests e.g. for VMs and SVN or Git repositories</td>
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<tr>
<td>• Respond to user-reported incidents with applications and infrastructure services in a timely and courteous fashion</td>
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<tr>
<td>• Ongoing patching of Linux based services</td>
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<tr>
<td><strong>Long Term Planning and Development</strong></td>
<td>20%</td>
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<tr>
<td>• Identify and pursue opportunities to apply automation and orchestration tooling and modern practices to reduce the proportion of day-to-day work.</td>
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<tr>
<td>• Work with other teams to undertake their routine operational tasks, freeing them up to improve the services we provide, with a continual view to applying automation to eliminate unnecessary work wherever practical.</td>
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<tr>
<td>• Use monitoring tools to ensure services meet agreed service level objectives, and to assist in forecasting capacity requirements</td>
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<td>• Maintain documentation standards and develop cross support within the team</td>
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<tr>
<td><strong>Change Management and Projects</strong></td>
<td>20%</td>
</tr>
<tr>
<td>• Work within projects to improve and develop infrastructure services based on the Linux platform</td>
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<tr>
<td><strong>Developing Self</strong></td>
<td>10%</td>
</tr>
<tr>
<td>• Maintain own skills and knowledge in line with the requirements of the service and of the changing landscape of the wider computing profession</td>
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</tbody>
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Internal and External Relationships

Building and maintaining good working relationships with customers and colleagues is a key requirement of the post holder. Relationships will include:

- Daily interaction with customers requiring assistance
- Daily communication with team leaders and service owners within IT Services
- Weekly communication with operational team leaders in other parts of the University
- Weekly communication with team leaders requesting management information
- Weekly communication with project managers introducing new or changed services
- Periodic attendance at meetings with other teams.

This role also requires the development of relationships with counterparts in other organisations in order to build and share best practice. The successful candidate can expect to work in a supportive environment, and to have access to formal and informal opportunities to learn and grow.

Planning and Organising

The successful candidate will be joining a small team of people responsible for administering a heterogeneous estate of Linux servers, grouped into two main functions:

**Network services**

Around 200 Debian Linux systems that currently provide core network services such as DHCP, DNS, RADIUS, NTP, load balancing and SMTP, as well as non-user-facing services such as centralised syslog collection, our PXE boot service.

Our on-campus MXes are Exim-based, and are responsible for performing spam filtering and antivirus scanning along with rate limiting of incoming and outgoing mail. These mail “hub” servers act as gateways between the Office 365 email service and the internet.

There is a project underway to upgrade from Debian 8 (“jessie”) to Debian 9 (“stretch”) over the coming months, and some of these systems may be replaced by third-party solutions in order to improve manageability of these services.

**LAMP web hosting services**

Around 300 “LAMP” servers provide web hosting for University researchers.

Workloads are a mixture of PHP and Java Tomcat for frontend, with MySQL and PostgreSQL databases behind.

These servers are primarily running Suse Linux Enterprise Server 11 (SLES11) with Spacewalk for patching and configuration management, but work is underway by RCS to migrate to CentOS 7 with Foreman, Katello and Puppet in place of Spacewalk, and a number of services have already been moved over to the new platform.

The role also contributes to the planning of service improvements within IT Services over a 12-15 month horizon and requires knowledge and understanding of the University’s annual planning cycle.
# Job Summary

## Qualifications, Knowledge and Experience

### Essential
- Substantial relevant experience of systems administration*
- Experience working in a complex IT Service within a large organisation*
- Significant understanding of Linux*, including operating system fundamentals
- Significant experience of programming, of writing scripts in an administrative language such as Perl or Python, or of using moderately advanced Linux/UNIX command line shell features such as: redirecting output to and from files, using pipes and “grep” to search the output of one program for a given piece of text
- Awareness of networking concepts such as DHCP, NTP, DNS *

### Desirable
- A degree in Computer Science or a related field*
- Experience with most aspects of operating system administration; for example, managing processes and services, configuration of mail systems, system installation and configuration and fundamentals of security
- Familiarity with the principles and practices of system configuration using modern declarative tools (such as Puppet, Ansible, Terraform), along with the ability to model and reduce complex system requirements as configuration declarations*
- Familiarity with fundamental networking/distributed computing environment concepts
- Awareness and understanding of basic routing and switching concepts such as subnets and VLANs*
- Familiarity with common web server software such as Apache, Nginx or Tomcat*
- Familiarity with SQL and common database server software such as MySQL and PostgreSQL*
- Familiarity with network server software such as BIND, TFTP and DHCPD* 
- Building and debugging software under Linux using standard tools*

## Skills, Abilities and Competencies

### Essential
- Strong interpersonal skills
- Strong verbal and written* communication skills
- Strong ability to learn
- Strong analytical skills
- Strong problem solving ability
- Excellent team player
- Able to work with minimal supervision. Self-confident and self-motivated. Able to organize, prioritize and plan own work

*Criteria to be used in shortlisting candidates for interview

## VITAL

The University encourages all staff to live our VITAL values which are: 
Valuing People, Innovators, Together, Accountable, Leaders.
Job Summary

Equality and Diversity

We believe that equality, diversity and inclusion is integral to a successful modern workplace. By developing and implementing policies and systems that challenge stereotypes across all aspects of our work, we have a culture that recognises and values the diverse contributions of our staff which benefits everyone. Our strong values of inclusivity and equality support our efforts to attract a diverse range of high quality staff and students, and identify our University as a progressive and innovative workplace that mainstreams equality, diversity and inclusion.