



## ADVERTISEMENT

### SAPRI Senior IT Systems Administrator

Contract type: Permanent

Job Level: Skilled / Middle Management

Work Location: Cape Town, Western Cape

The South African Environmental Observation Network (SAEON) is a research platform funded by the Department of Science and Innovation (DSI) and managed by the National Research Foundation (NRF).

SAEON is mandated to establish and manage long-term environmental observatories; maintain reliable long-term environmental data sets; promote access to data for research and/or informed decision making; and contribute to capacity building. This position is supported by the DSI's South African Polar Research Infrastructure (SAPRI) programme.

This key team member will take the lead in the formulation and implementation of system-wide policies to maximize the system's effectiveness and ISO 14721 compliance, and will be responsible for ensuring the security of the system and of the information residing on it. She/he will also assist the team lead in selecting and implementing support for data ingest, storage and dissemination protocols. Their key focus will be on the SAPRI and marine based infrastructure but will support SAEON wide systems administration.

The primary responsibility will be daily management and operation of the linux servers and linux-based information systems maintained by the team, and for planning their future expansion.

#### Key Responsibilities:

Provide the highest reliability (uptime) and responsiveness of service in the Linux servers and LAN.

Implement monitoring software to warn of impending infrastructure issues and take appropriate remedial action.

Ensure adequate provision of backup and failover facilities.

Testing of backups in accordance with industry best practices.

Select, procure and install hardware and software to improve the Linux systems' reliability, responsiveness, and scientific utility.

Provide robust technical advice on the configuration and support of system components and services.

Conduct forward planning and contribute to the SAEON and SAPRI and other research infrastructure roadmaps.

Maintain a blueprint of infrastructure and configurations.

Work with the SAEON Systems Coordinator to ensure that LIVE and TEST copies of all major systems are maintained, available, and under configuration control.

Proactively manage these systems and design them for future needs with assistance from the information management team.

Maintain business continuity information on a designated external server(s) to assist with disaster recovery.

Ensure that system logs are monitored and that anomalies are detected and responded to in a timely fashion.

Provide regular reporting to team leads and senior management on the status of the system.

Work with the SAEON Network Engineer to ensure policy compliance and security provision.

Lead and assist in the development of information systems policies and their implementation.

Provide support to scientists utilizing the system, in particular ocean modellers.

Develop standard procedures and document knowledge as required for transfer of duties to an external party.

#### Key Requirements:

##### Qualification:

BSc in Computer Science and 5 years relevant experience, or

Bachelor's Degree or diploma in Computer Science with 5 years relevant experience or Certified training with 10 years relevant experience.

##### Experience:

- \* Experience installing and tweaking, and occasionally building from source, a variety of software packages required to support mission. Experience with make, yum, rpm.
- \* Experience implementing onsite virtualization (e.g. Proxmox, kvm).

- \* Experience with XML, HTML and web servers - Apache, NGINX; creating websites and web pages.
- \* Experience with implementing and managing a wiki (Twiki or similar).
- \* Experience with Enterprise Storage like iSCSI and NFS
- \* Experience working with Enterprise server hardware
- \* Experience with Networking and network protocols and virtualization.

**Knowledge:**

- \* Linux system administration - essential: familiarity with build, configuration and deployment of RHEL or Fedora or CentOS systems. Familiarity with other distributions such as Ubuntu a plus. Familiarity with network configuration and administration including BIND and DHCP. Knowledge of and experience with managing secure system firewalls.
- \* Knowledge of good system security practices, common packages and ability to implement these.
- \* UNIX shell scripting - bash, sh, csh, cron, and similar utilities.
- \* Overseeing and determining timeframes for major IT projects including system updates, upgrades, migrations and outages.
- \* Monitor performance of information technology systems to determine cost and productivity levels, and to make recommendations for improving the IT infrastructure.
- \* Help define IT infrastructure strategy, architecture, and processes
- \* Devising and implementing policy for backup and failover scenarios.
- \* Ensure security of data, network access and backup systems
- \* Preserve assets, information security and control structures
- \* Running and sharing regular operation system reports with senior staff
- \* Knowledge of secure SSL certs and how to properly implement such certificates.

**Additional Notes:**

- \* Ability to contribute to devising and implementing policy for backup and failover scenarios.
- \* Strong critical thinking and decision-making skills
- \* Capacity to assess, learn and adopt new IT technologies
- \* Strong interpersonal and communication skills for managing team and internal and external stakeholders
- \* Personal integrity in handling sensitive and personal data

**Information:**

The website [www.nrf.ac.za](http://www.nrf.ac.za) provides more details on the NRF initiatives and activities.

**Applications:**

Applicants should submit a comprehensive CV by logging to <https://ess.nrf.ac.za/Account/Recruitment> and apply online. Applications should be accompanied by a letter of motivation indicating the applicant's suitability for the position. The names and contact details of at least three referees should be provided.

**Closing Date: 07 October 2022**

The NRF offers a challenging career and competitive remuneration package which is commensurate with qualifications and experience. The NRF is committed to employment equity and redress and the appointment to the position will be made in line with the NRF Employment Equity Plan.

The NRF reserves the right not to make an appointment.

Correspondence will be sent to short-listed candidates only