

CORNELL UNIVERSITY
STAFF POSITION DESCRIPTION

Date: Jan 17, 2019

The university job title classification will be determined in accordance with the [Position Classification Process](#).
Please refer to the [Guidelines for Preparing the Staff Position Description](#) prior to completing this document

Current Incumbent, if any: _____	Position #:	_____
University Job Title: <u>Systems Administrator III</u>	Pay Band:	F
Working Title (if different): _____	Exempt: X	Nonexempt: <input type="checkbox"/>
Department Name: <u>Weill Institute for Cell and Molecular Biology</u>	Dept Code:	G56/3456
Immediate Supervisor's Name and University Job Title: <u>Bill Loftus, Administrator V</u>		

POSITION SUMMARY, REQUIRED QUALIFICATIONS and PREFERRED QUALIFICATIONS are combined for any associated posting.

POSITION SUMMARY: Explain the purpose for the position and summarize the responsibilities.

Provide day-to-day server administration and user support for WICMB web and **research** servers, desktops and laptops running Windows, Linux, and MacOS, including specialized systems for scientific research. Assist with setup and deployment of WICMB computers. Maintain servers, monitor network performance, and provide solutions for data security, storage, backup and recovery. Manage software license and hardware inventory. Maintain knowledge of, and help implement, Cornell IT policies and practices.

REQUIRED QUALIFICATIONS: Specify required minimum equivalency for education, experience, skills, information systems knowledge, etc.

Bachelor's degree with at least three years' experience related to above duties, one year of which should be in a scientific research environment, or equivalent combination required. Interpersonal and communication skills sufficient to collaborate with WICMB faculty, staff and students. Must be able to work independently and as part of a team. Excellent organizational skills and ability to manage multiple projects on tight deadlines. Understand various Institute activities well enough to anticipate problems and implement solutions that not only maintain but improve operational effectiveness.

Specific technical qualifications include:

- A working understanding of code and script (Bash, Python, Perl, R, MATLAB, and PHP)
- Clear comprehension of security measures on a web server.
- Experience with source control systems like SVN, GIT or Bitbucket
- Working knowledge of SNMP (Simple Network Management Protocol) and SCCM (System Center Configuration Manager).
- Knowledge of Services Oriented Architectures (such as Apache, NGINX, Python, PHP, SQL and Flask).

PREFERRED QUALIFICATIONS: Specify preferred specialized education, field and/or certifications.

More than two years of experience in a biology research environment, with an understanding of specific needs related to management and analysis of large amounts of data. Also prefer experience integrating IT services with sophisticated experimental equipment.

RESPONSIBILITIES/ESSENTIAL FUNCTIONS: List the position's assigned responsibilities and estimate percentage of annual time spent on each responsibility. Include only the essential functions that are fundamental and necessary to the position.

	APPROXIMATE % OF TIME, ANNUALIZED
Linux Server Administration: <ul style="list-style-type: none"> • Provide Linux/Unix administration, including shell scripting, for several labs in the Institute. • Conduct MySQL and PostgreSQL database administration in Linux environments, including performance analysis and tuning. • Work with machine learning or predictive modeling and related development technologies. Help data scientists set up custom Conda Python coding notebooks in development environments for use on a JupyterHub host, and capturing it for automated deployment. • Create and migrate virtual machines such as Docker, VMWare, or similar technologies. • Develop and maintain multiple Web servers, related applications, and Services Oriented Architectures (such as Apache, NGINX, Python, PHP, SQL and Flask). • Provide nameserver administration of hostnames and domain names. 	35%
End User Support: <ul style="list-style-type: none"> • Provide technical support for both hardware and software issues encountered by the Institute's users, with a working knowledge of macOS, Windows, and Linux. • Train students to become familiar with Linux systems and the command line. • Help new members set up and install VPN software and show how they can access internal resources remotely. • Provide user administration, setup and maintenance through Active Directory and SCCM. • Troubleshoot and maintain 50+ storage PCs connected to major lab equipment for control and data analysis. • Troubleshoot and maintain audio-visual equipment; assist users with conference room setup. 	25%
Hardware configuration, fabrication, and maintenance: <ul style="list-style-type: none"> • Serve as expert consultant to PIs regarding server and related hardware purchases. • Plan, design and build complex server enclaves for computational biology and bioinformatics research. • Quickly arrange repair for hardware on occasion of hardware failure. • Verify that peripherals are working properly. • Register MAC addresses through DNS by issuing hostnames and IP addresses to new systems. 	15%

Software Patching and Network Security: <ul style="list-style-type: none"> • Manage the configuration and operation of client-based computer operating systems. Update systems and processes as required for enhanced functionality and security issue resolution. • Install and configure software, including the purchase and management of software licenses. • Monitor network performance and report any issues to CIT. • Serve as IT Security Liaison for Institute, in compliance with Cornell policy. 	10%
Disaster Readiness and Recovery: <ul style="list-style-type: none"> • Create and verify backups of data. • Maintain a backup and recovery policy. • Properly document practices in form of internal wiki for sharing Institute-specific knowledge and procedures with other IT professionals. • Monitor performance and utilization using technologies such as SNMP and WMI. 	10%
Other: <ul style="list-style-type: none"> • Represent Institute at meetings related to IT. • Serve as Institute's Telecommunications Coordinator. • Provide backup to administrative staff during their absence or when administrative workload is unusually heavy. • Perform other duties determined by management to be related to IT or administrative needs not listed above. 	5%

TOTAL 100%

ADDITIONAL COMMENTS: USE EXTRA PAGES IF NECESSARY.