

SYSADMIN: ROLE, RESPONSIBILITIES, JOB DESCRIPTION & SALARY TRENDS



Sysadmins are vital roles within every company's IT department, often covering a wide swath of technology support. Common sysadmin tasks may range from installation and deployment of servers to providing troubleshooting and technical support for projects.

If you're reading to explore a career in system administration, you've come to the right place. In this article, we'll define the sysadmin job, roles and responsibilities, and salary trends.

What is a sysadmin?

Short for "system administrator", sysadmins are responsible for administration, management, and support activities associated with the IT infrastructure at a multi-user organization. Responsibilities within the domain of IT systems administration can be distributed across different job titles depending on size of the organization or the scope of work required. For instance, database administrator (DBA), security administrator, and network administrator may be distinct job roles at a large enterprise but accomplished by an individual sysadmin at an SMB organization.

End users frequently interact with sysadmins through support ticketing systems and sysadmins respond with appropriate changes and solutions while maintaining organizational policies for issue resolution.

Sysadmin role and responsibilities

The responsibilities of a sysadmin position typically include the following:

- **User administration.** The primary responsibility of a sysadmin is to support reliable and effective use of complex IT systems by end users, whether internal employees or external customers. Activities range from managing identities and access to providing dedicated technical support to individual users. Sysadmins may be the focal contact point within IT departments for users to resolve any technology related issue.
- **System maintenance.** Sysadmins are responsible for dependable access and availability to IT systems. Sysadmins are therefore required to troubleshoot and fix issues that compromise system performance or access to an IT service. This responsibility also involves regular system improvements, such as upgrades based on evolving end-user and business requirements.
- **Documentation.** Sysadmins are required to maintain records of IT assets usage. End-user requests, business requirements, and IT issues are documented to plan for future IT investments and upgrades. Documentation also serves as a key requirement for regulatory compliance.
- **System health monitoring.** Most IT issues go unnoticed until the impact reaches end users. Sysadmins therefore monitor system health and identify anomalous network behavior, which may include security-sensitive activities such as unauthorized network access and data transfer. Advanced technology solutions may be used to accomplish these tasks, supporting the wider IT Security and Operations departments.
- **Backup and disaster recovery.** Sysadmins implement data backup and disaster recovery strategies for different IT systems and [SDLC](#) environments. They also facilitate end-users in accessing data that may have been deleted or unavailable. Activities may involve implementation of automated software solutions or replacement of hardware and software components.
- **Application compatibility.** Sysadmins support IT teams to ensure that software systems and feature releases are compatible with the IT infrastructure. Activities such as testing server load performance and installing or upgrading hardware components may be performed by a sysadmin.
- **Web service administration and configurations.** Sysadmins regularly perform web service administration and configuration management activities, including ensuring that configuration changes are documented and follow organizational policies associated with access and [cybersecurity](#). Configuration changes may be applied using automation and configuration management tools.
- **Network administration.** Sysadmins ensure that network interactions follow organizational policies and protocols In order to maintain network integrity. A background in network engineering may be required to perform mission-critical network administration activities.
- **Security administration.** Security responsibilities are centered on infrastructure and network security, with activities including network monitoring and analysis, identity and access management, security of hardware components and management of software licensing, updates and patching. Sysadmins adopting these responsibilities tend to work closely with security specialists and engineers within the organization as well as external consultants.
- **Database administration.** Sysadmins may be responsible for maintaining the integrity, performance, and efficiency of database systems. Database management activities may include migration, design, configuration, installation and security of the organization's data

assets. Sysadmins may act as liaison with users to address database related issues, including backup and restoration activities.

- **Installation and patching.** Sysadmins are responsible for managing, troubleshooting, licensing, and updating hardware and software assets. They ensure that appropriate measures are proactively followed in response to unforeseen issues such as IT downtime or zero-day exploits. The activities are documented and follow a strategic approach as devised by the organization.
- **User training.** While sysadmins directly communicate with end users to solve technical issues, they may also conduct training programs to bring users up to pace with new software installations or IT system changes. These training programs may not pertain to specialized engineering tools, but the Web portal and procedures required to access the corporate network and IT services. Sysadmins are not only expected to be knowledgeable in their professional domains, but also boast effective communication skills.

Common skills for sysadmins

Sysadmin positions may not require engineering know-how, but a strong background in IT is necessary to perform sysadmin duties. Here are some common skills needed to be a successful sysadmin:

- **Subject matter expertise.** Most organizations employ multiple individuals specializing in specific system administration domains, so you'll want to be an expert in one or more of the following:
 - Computer systems
 - Networks
 - Hardware and software troubleshooting
 - Databases
 - Web services
- **Problem solving.** You're often the first person called upon to deal with a problem, so troubleshooting and understanding key systems are essential.
- **Strong interpersonal and communication skills,** both written and verbal, as you'll deal with technically-minded employees and non-technical colleagues alike.

Sysadmins in traditional IT departments don't follow development and engineering responsibilities. Most modern organizations following Agile and [DevOps](#) ITSM frameworks use automation tools, infrastructure automation, and Infrastructure as a Code practices to operate IT systems. These technology solutions and practices have transformed the way infrastructure is managed and provisioned. Therefore, strong background in computer science and programming may be essential for sysadmins to succeed.

Sysadmin certifications and education

System administration is a domain of continuous learning in response to new technology release and adoption trends. Successful sysadmins therefore follow regular certification programs, which yield an average of 7.6% increase in salary.

While a Bachelor's degree in computer science can be helpful, some industry-leading certifications and the right hands-on experience can easily supplant formal academic learning. Here are some top

certifications for sysadmins:

- [Microsoft Windows Server and Desktop certifications](#)
- [CompTIA Network+ and A+](#)
- [Unix](#)
- [Linux](#)

Depending on your specialization or career aspirations, these [wider IT certifications](#) may also be useful.

Sysadmin salary trends

System Administration is hard work and forms the foundation of every engineering activity in IT-driven enterprises. [RedHat indicates](#) that sysadmins in the U.S. average:

- An annual salary of \$68,000 at the beginning of their career
- \$81,500 for average experience and job complexity
- \$115,750 for the most commanding sysadmin positions

These salaries place the sysadmin position 20th in earning potential in tech-related positions.

Additional resources

To learn more about jobs and careers in IT, see other posts in our jobs series, including:

- [What is a Technical Support Engineer? Explore Roles, Responsibilities, and More](#)
- [Agile Roles and Responsibilities](#)
- [IT Director Role and Responsibilities: What Does a Director of Technology Do?](#)
- [CIO vs CTO: What's the Difference?](#)