

Stay Connected: Wired and Wireless Networking Solutions

By: Elizabeth Mott

When you network your office devices, employees share access to output devices, work groups can collaborate on documents and projects, and the process of adding specialists or contractors to your staff is simplified. How you set up and configure a network depends on your office space, how many people need to access data and hardware, and the types of computer equipment they use. Both wired and wireless networking offer advantages and present challenges. The networking method you choose depends on the best match for your work flow and staff.



AmmentorpDK/iStock/Getty Images

Wired Networking

Wired networks operate at gigabit speeds, capable of moving up to 1,000 megabits of data per second. The cabling that supports wired networking can run for long distances without signal loss—up to 100 meters, or 328 feet. By comparison, USB connections top out at a limit of 16 feet. How you set up Ethernet wiring depends on the numbers and types of devices you need to connect, plus the size and layout of your office space. In a large office suite with multiple rooms, you'll find built-in wiring is the best because you can plug a cable into a wall outlet to connect to the network. Your network becomes another plug-in convenience like electric power or wired phone service.

Installation Considerations

Putting in permanent wiring involves time and expense. And if you lease your office space, your landlord may object to a request to add a wired networking setup. After you install network cables, it becomes difficult to upgrade for future standards, and difficult to access if the wiring should fail. Running network cabling outside the walls leaves you with visible wiring that runs the risk of damage from chair casters and careless footfalls. Wired networking is a less convenient choice if your employees need to connect devices that function primarily in wireless mode, such as tablets and laptops.

Wireless Networking

When you opt for a wireless network, you avoid the need to run cables from room to room. A wireless router distributes viable signals through 3,000 square feet or more of

space, depending on the construction materials used in the building and the interference from other devices such as cordless phones and microwave ovens. As more and more tech users opt for wireless devices and increasing numbers of companies allow employees to bring their own technology to work, wireless networks provide work-anywhere convenience that suits open office plans, and flexible work schedules.

Security and Practical Limitations

Wired networks give you greater control over who uses your bandwidth and the online destinations they visit. You can track who connects where, monitor the files they download, prohibit them from accessing parts of your network that contain confidential and proprietary data, and stop malware from creeping onto your server through the devices that make use of your network. Wireless connections offer far less built-in protection. The chances that intruders can make their way onto your system increases when you allow any device to log in wirelessly with valid access credentials. Wireless connections offer slower speeds than wired networking. And the signal that provides wireless access weakens as distance from the router increases.