***Modular switches***

**Modular switches let you add expansion modules as needed, giving you flexibility as network requirements change. Expansion modules are application-specific and include those for firewalls, wireless connectivity, or network analysis. They may also allow for additional interfaces, power supplies, or cooling fans. This type of switch provides you with the most flexibility, but at a higher cost.**

***Fixed-configuration switches***

**Fixed-configuration switches provide a fixed number of ports and are typically not expandable, which makes them less expensive overall. Fixed-configuration switches include unmanaged switches, smart switches, and managed switches.**

***Unmanaged switches***

**Unmanaged switches are typically used to provide basic connectivity. They're designed to be plug and play; no configuration is needed. Unmanaged switches are most effective when only basic switching and connectivity are required. You will often see them in home networks or wherever only a few ports are needed, such as at a desk, in a lab, or in a conference room.**

***Smart switches***

**Smart switches offer some management and segmentation, quality of service, and security capabilities, so they can be a cost-effective alternative to modular switches. Still, they are not as scalable as managed switches. These switches are typically deployed at the edge of a large network (while managed switches are used in the core), as the infrastructure for smaller networks, or for low complexity networks.**

***Managed switches***

**Among fixed-configuration switches,**[**managed switches**](https://www.cisco.com/c/en/us/solutions/small-business/networking/switches.html#~on-premises)**are designed to deliver the most comprehensive set of features to provide the best application experience, the highest levels of security, the most precise control and management of the network, and the greatest scalability. As**

**networks.**

***Benefits or advantages of Switches***

**Following are the benefits or advantages of Switches:  
➨They increase the available bandwidth of the network.  
➨They help in reducing workload on individual host PCs.  
➨They increase the performance of the network.  
➨Networks which use switches will have less frame collisions. This is due to the fact that switches create collision domains for each connection.  
➨Switches can be connected directly to workstations.**

***Drawbacks or disadvantages of Switches***

**Following are the disadvantages of Switches:  
➨They are more expensive compare to network bridges.  
➨Network connectivity issues are difficult to be traced through the network switch.  
➨Broadcast traffic may be troublesome.  
➨If switches are in promiscuous mode, they are vulnerable to security attacks.  
➨Proper design and configuration is needed in order to handle multicast packets.  
➨While limiting broadcasts, they are not as good as routers.**