

In the realm of enterprise networking, the choice of network devices plays a pivotal role in shaping the efficiency, reliability, and security of an organization's digital infrastructure. This is especially true when working to add redundancy to the network. This analysis will look at three different manufacturers of network devices offered by leaders within the industry. We will also analyze which one may be a better solution for within the company. The table below shows a comparison of the three chosen manufacturers and the products that are being considered for this project.

Manufacturer	Device Name	Ports	Managable	Cost	Qty Needed
HP	HPE-1950-48G-2SFP+-2xgt-POE	48	y	\$ 1,314.93	2
HP	HPE Aruba FlexNetwork MSR3016	Multiple	y	\$ 3,227.99	1
Cisco Meraki	MS410-16	16	y	\$ 8,073.99	2
Cisco Meraki	MX85	8	y	\$ 2,115.99	1
Cisco	ISR4431	4	y	\$ 6,419.99	1
Cisco	Catalyst 9300	24	y	\$ 5,374.99	2

Table 1: Pricing from CDW.com at <https://www.cdw.com>

#### HP Devices

The HP HPE-1950-48G-2SFP+-2xgt-POE is a robust networking switch featuring 48 ports, two SFP+ ports, and two Gigabit ports with Power over Ethernet (PoE) capability. Its manageable nature makes it suitable for enterprises seeking control over their network infrastructure. With a moderate cost of \$1,314.93 per unit and a requirement of two units, it offers an attractive balance of features and affordability. The HPE Aruba FlexNetwork MSR3016 is a versatile multi-service router designed to meet the complex networking needs of enterprises. It offers manageability and a plethora of ports to facilitate seamless connectivity. However, its higher cost of \$3,227.99 per unit might be a deterrent for organizations with budget constraints.

#### Cisco Meraki Devices

The Cisco Meraki MS410-16 switch is a compact yet powerful solution, featuring 16 manageable ports. Priced at \$8,073.99 per unit and requiring two units, it falls on the higher end of

the cost spectrum. Nevertheless, its advanced management capabilities and robust performance make it a compelling choice for large-scale deployments. The Cisco Meraki MX85 is a security appliance equipped with eight manageable ports, offering comprehensive network protection and management functionalities. With a price tag of \$2,115.99 per unit, it presents an attractive option for organizations prioritizing security without compromising on cost-effectiveness.

#### Cisco Devices

The Cisco ISR4431 router boasts four manageable ports and advanced features suitable for enterprise networking environments. Priced at \$6,419.99 per unit, it represents a considerable investment, albeit justified by its robust performance and scalability. The Cisco Catalyst 9300 switch is a highly configurable device featuring 24 manageable ports, catering to the diverse needs of modern enterprises. With a cost of \$5,374.99 per unit and a requirement of two units, it strikes a balance between performance, scalability, and affordability.