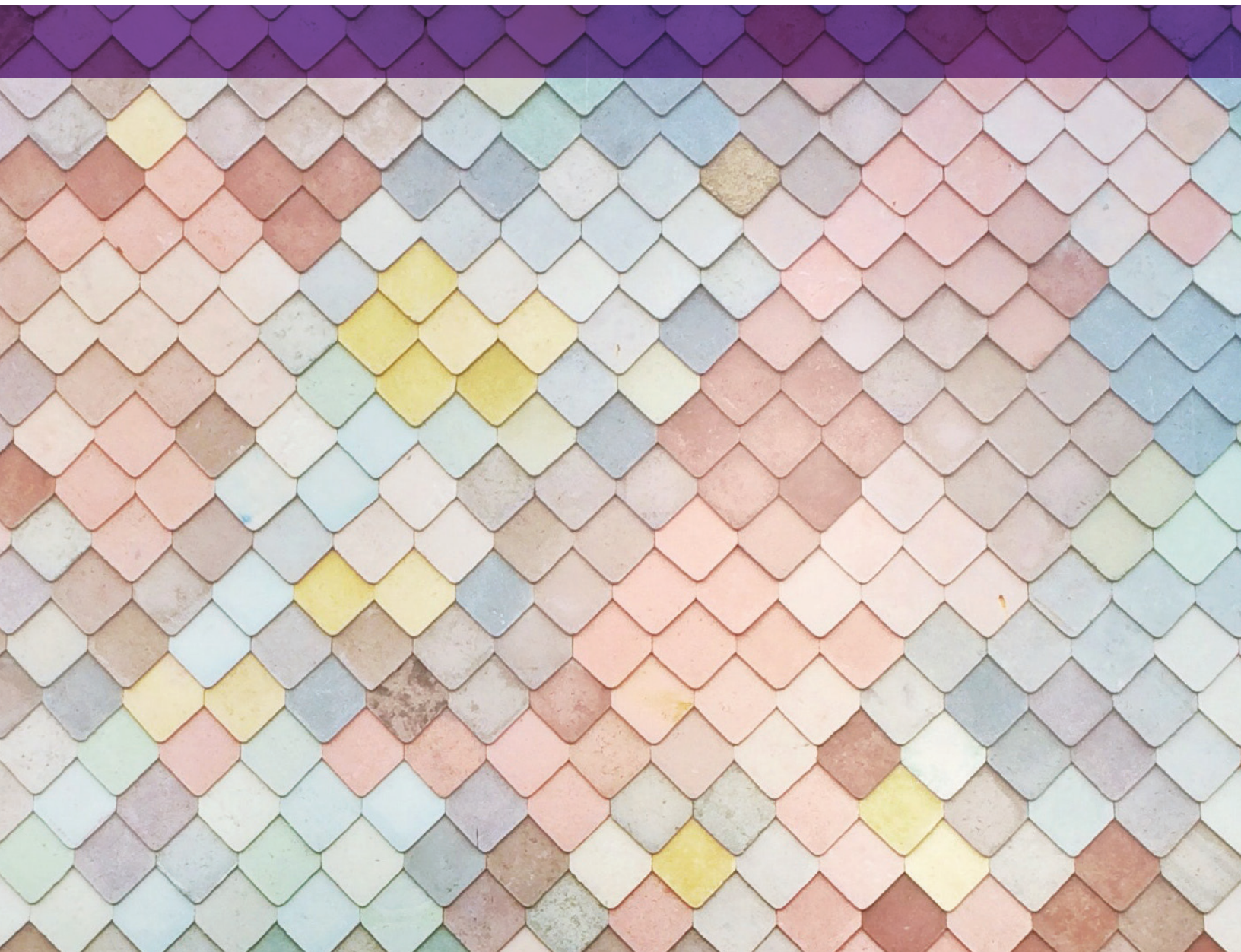




Managing Network Vendor Diversity: **The MSP Challenge Continues**



In August 2019, Auvik Networks looked at over 240,000 managed network devices deployed across nearly 35,000 networks under the care and management of more than 2,000 IT managed service providers (MSPs). The networks were located around the world, with a heavy concentration in North America.

The networks and the MSPs managing those networks ranged in size from small to large. We've defined small, medium, and large as follows:

Networks

- Small:** Fewer than 50 devices and workstations
- Medium:** 50 to 200 devices and workstations
- Large:** More than 200 devices and workstations

MSPs

- Small:** Fewer than 10 networks under active management
- Medium:** 10 to 50 networks under active management
- Large:** More than 50 networks under active management

The data focuses on four main types of managed network devices—access points, switches, routers, and firewalls—and their representation across MSP-managed networks. Unmanaged devices are not included in the data.

The data in this report relies on the accuracy of underlying SNMP, CLI, and API implementations on each device. While we can clean and build out the data by drawing on multiple sources and inferences, some information simply isn't available.

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EXECUTIVE SUMMARY

In the 2018 [Managing Network Diversity Report](#), Auvik discovered that managed service providers (MSPs), who manage anywhere from a handful of client networks to more than 100, face a big challenge: There's high diversity in the network hardware they operate.

In this 2019 edition of the report, we've set out to determine if network device diversity has increased or decreased after one year.

Looking at the same four categories of managed network devices—access points, switches, routers, and firewalls—deployed across MSP-managed networks, our data reveals a more crowded and fragmented market than before.

More than 50 vendors compete in each device category, with one category including 124 vendors. Fragmentation increases at the smaller end of the categories, as dozens of vendors compete for between 5% and 18% of the share in each.

Cisco continues to dominate as the most commonly deployed vendor on today's MSP-managed networks, but its share is declining. However, Cisco-owned Meraki is gaining network share and, when combined, Cisco devices still make up close to 33% of the hardware deployed on all networks. Switch vendor HP, who also owns access point vendor Aruba, is the second most commonly deployed network vendor, with just over 18% of devices.

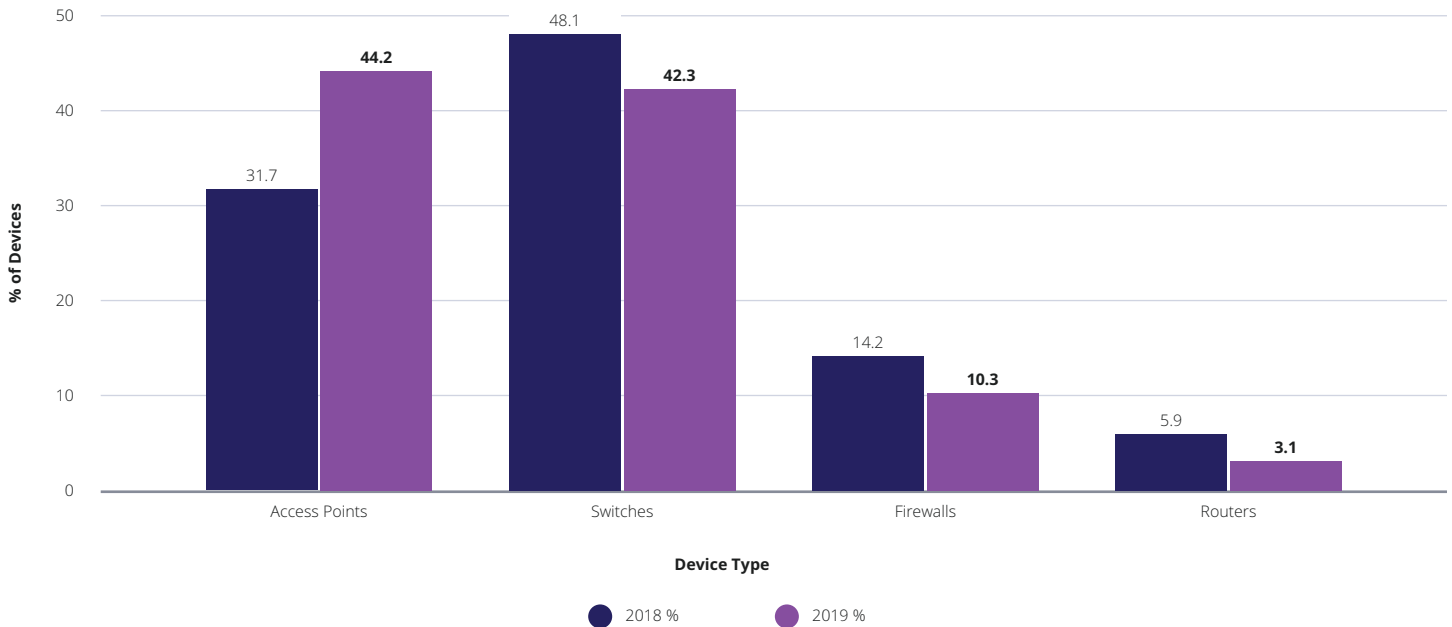
The top nine most commonly deployed vendors claim around 80% of all networks among them, leaving hundreds of smaller vendors to fight over what's left.

Most MSPs—over 70%—manage four or more network vendors for their clients. As an MSP grows, so does the number of vendors under management, with many medium MSPs managing seven or more vendors, and large MSPs managing 10 or more. These findings are consistent with last year's report.

MOST COMMON DEVICE TYPES

Network Makeup by Device Type

on networks managed by MSPs



Access points have overtaken switches as the most common network device, jumping 12.5 percentage points to claim a 44.2% share of networks of all sizes. This isn't a surprise—as businesses grow, so do their wireless needs, which means MSPs have to add extra access points to the network keep up.

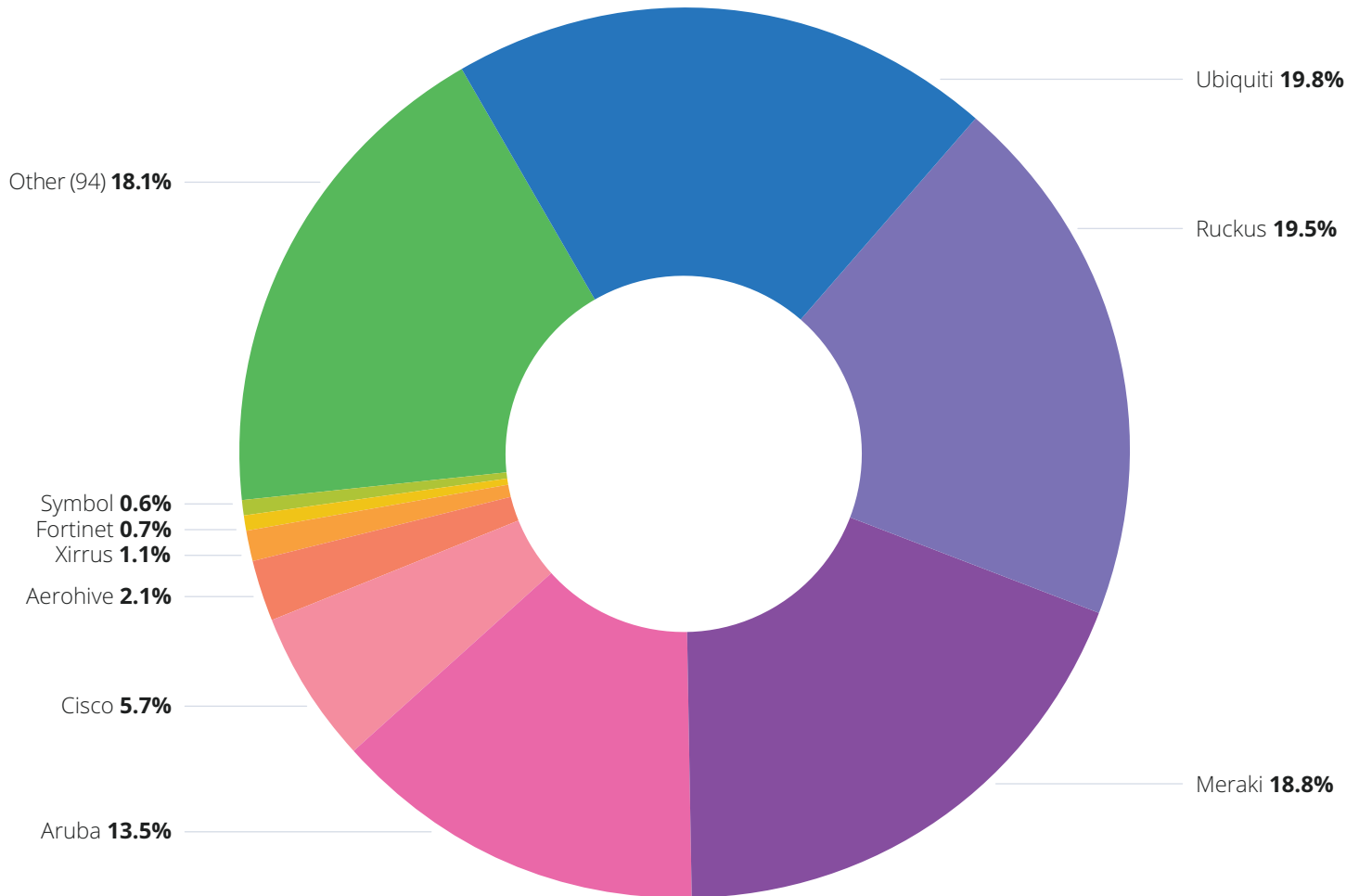
Routers remain the least common network device and are steadily losing ground, accounting for just 3.1% of all network devices, down from 5.9% in 2018. Routing is a key feature in SD-WAN (software-defined wide area network) technology, and since devices employing SD-WAN are growing in popularity, we expect routers will continue to lose network share.

TOP NETWORK DEVICE VENDORS

Most Commonly Deployed Access Point Vendors

on networks managed by MSPs

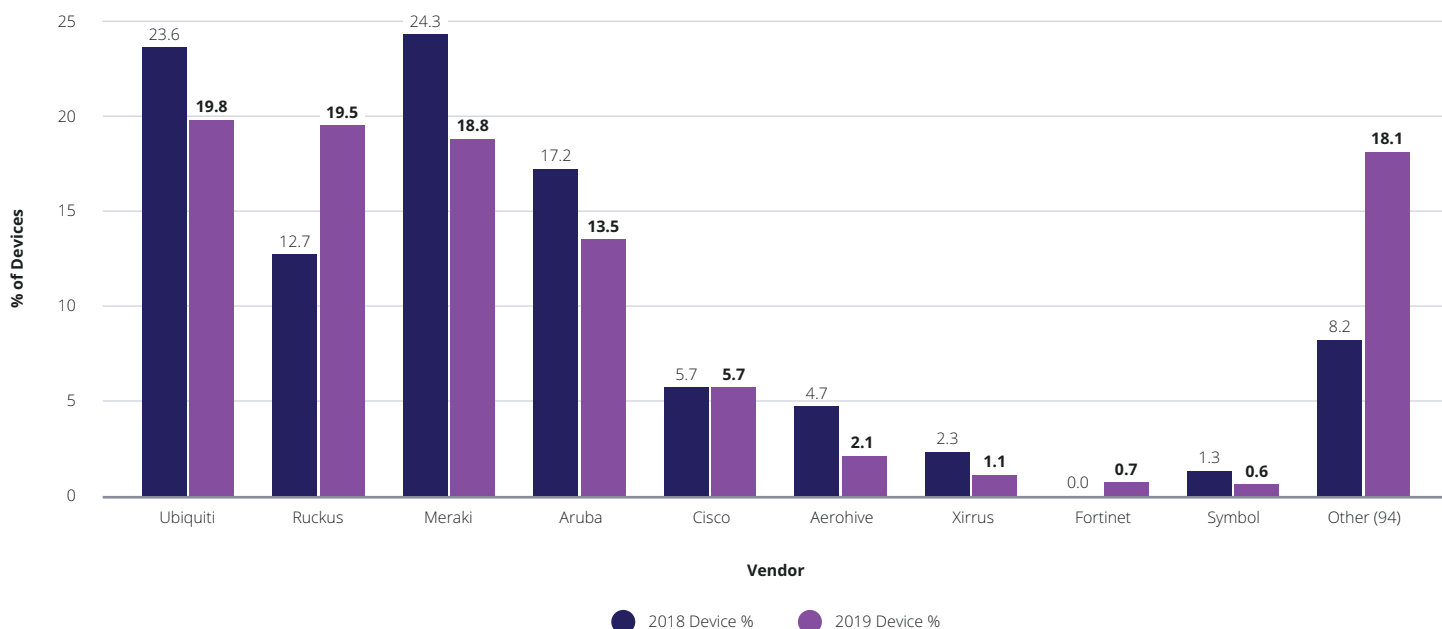
Total number of vendors represented: **103**



In the most tightly contested device category in the report, 1.0% separates first place Ubiquiti and third place Meraki for the title of most commonly deployed access point vendor in 2019.

Despite its close second place finish, Ruckus is the biggest winner, gaining 6.8 percentage points and leapfrogging Meraki and Aruba in the standings.

For vendors at the bottom of the list, you might think things are looking up: The Other category has jumped 9.9 percentage points and now accounts for 18.1% of access points across networks of all sizes. But the share isn't the only thing that has increased—in 2018, 61 vendors made up the Other grouping. This year, 94 vendors are included. If we split the Other share equally among the 94 vendors, it works out to 0.11% per vendor—down incrementally from the 0.13% category share the year before.



Biggest Shifts

	Small Networks % 2019		Medium Networks % 2019		Large Networks % 2019		Small MSPs % 2019		Medium MSPs % 2019		Large MSPs % 2019	
Ubiquiti	↓ 4.4	22.5	↑ 4.6	30.6	↑ 2.6	18.3	↑ 4.7	32.4	↑ 11.9	31.4	↓ 10.7	14.9
Ruckus	↑ 25.2	35.1	↓ 1.2	12.2	↓ 0.1	13.8	↑ 4.2	16.8	↑ 4.1	14.1	↑ 17.6	35.0
Meraki	↓ 2.7	19.7	↑ 2.5	26.0	↑ 1.4	27.7	↓ 5.4	20.1	↑ 1.4	22.8	↓ 2.5	24.9
Aruba	↓ 0.9	13.8	↑ 1.0	16.0	↑ 3.5	25.6	↑ 2.1	14.4	↓ 7.0	16.4	↑ 7.9	17.8

↑ ↓ indicate % change from 2018

While Ruckus is clearly the most popular access point vendor on small networks, it's a close fight among other vendors for first place on medium and large networks. On mid-sized networks, only 4.1% separates Ubiquiti and Meraki, while 2.1% separate Meraki and Aruba on larger networks.

The most popular access point vendors for small, medium, and large MSPs aren't as contested: Small and medium MSPs manage a lot of Ubiquiti access points, while large MSPs manage a lot of Ruckus.



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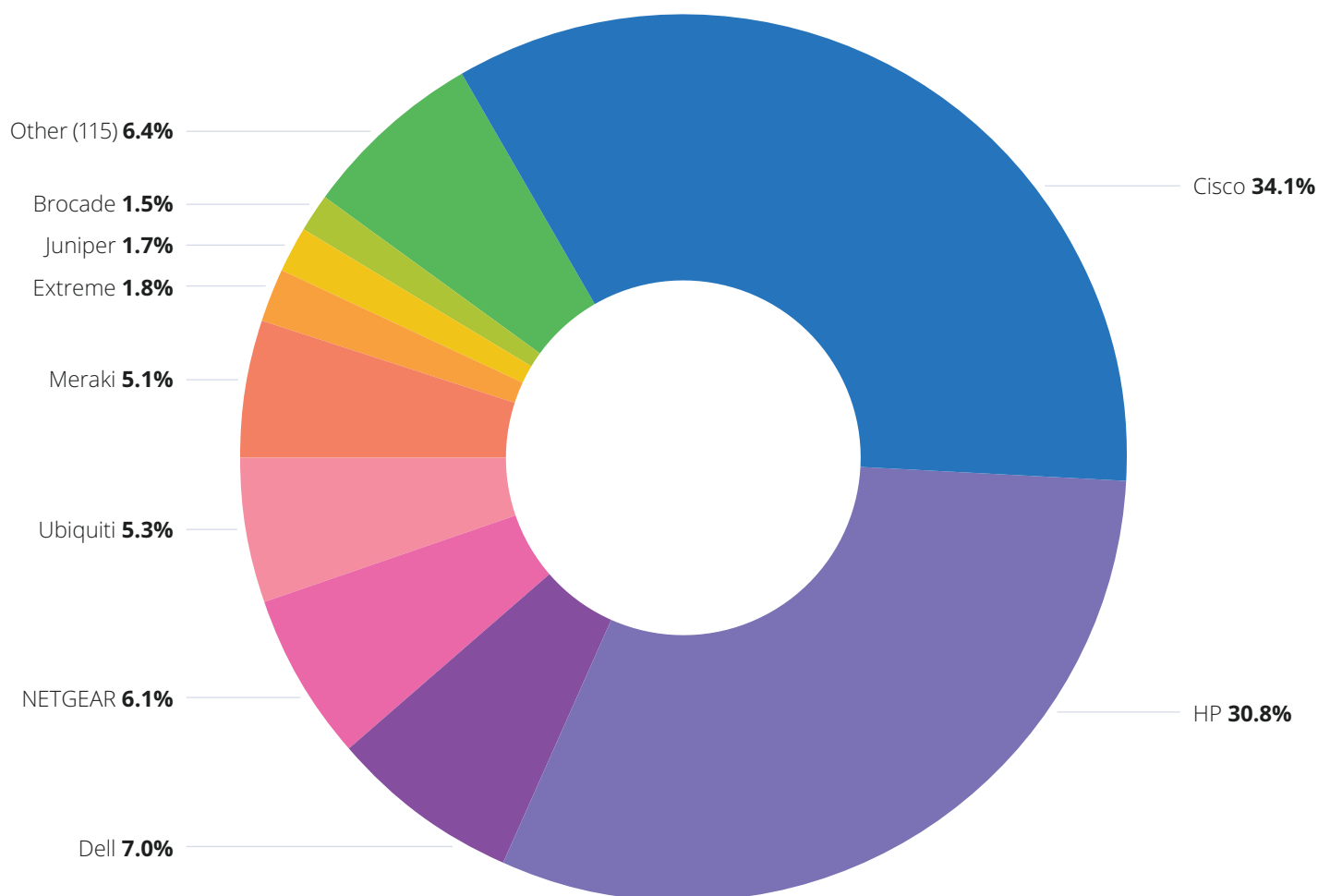
As the access point market becomes more competitive and the top four category vendors establish nearly equal footing, choosing between the four will come down to an MSP's priorities. If we take a look around the industry, here's what MSPs are saying about access point vendors:

- **Ubiquiti** offers enterprise-level performance and configuration at consumer pricing.
- **Ruckus** offers flexibility with five ways to control access points. They also offer a "single pane of glass" view of their network devices—but it's only achievable if the entire Ruckus stack is deployed on a network.
- **Meraki** offers an out-of-the-box product that's easy to install and manage. If things get sticky, they also offer 24/7 phone support. But it comes at an enterprise cost.
- **Aruba** offers a level of support that's highly regarded in the industry. Aruba's reasonable cost is also a bonus, but its access points are better suited for enterprise networks because they require some expertise to manage.

Most Commonly Deployed Switch Vendors

on networks managed by MSPs

Total number of vendors represented: **124**



Among the four types of network devices, switches remain the most crowded category with a whopping 124 vendors represented. Despite the large number of vendors, the category is top heavy: The top nine switch vendors account for 93.6% of switches, and Cisco and HP own 64.9%.

While Cisco's lead over HP is shrinking, the company holds onto first place for another year. With Cisco-owned Meraki being the sixth most commonly deployed switch vendor, Cisco takes a total 39.2% share of network switches and a much larger lead over HP.



Biggest Shifts

	Small Networks % 2019		Medium Networks % 2019		Large Networks % 2019		Small MSPs % 2019		Medium MSPs % 2019		Large MSPs % 2019	
Cisco	↓ 5.1	32.7	↓ 0.7	31.6	↓ 4.4	36.7	↓ 2.3	33.2	↓ 2.8	33.8	↓ 5.6	32.0
HP	↑ 3.1	29.6	↑ 0.4	33.4	↑ 4.8	34.6	↑ 1.2	29.7	↑ 1.4	31.5	↑ 3.0	34.9
Ubiquiti	↑ 2.9	7.2	↑ 1.9	5.6	↑ 1.5	3.3	↑ 2.4	7.0	↑ 3.5	6.2	↑ 1.3	4.2
Meraki	↑ 2.1	4.8	↑ 2.1	5.7	↑ 1.7	5.2	↑ 0.8	3.9	↑ 1.1	4.4	↑ 3.9	7.4

↑ ↓ indicate % change from 2018

Cisco's loss across small, medium, and large networks is good news for HP, whose growth trajectory could see it become the most popular switch on small and large networks next year—it's already #1 in medium networks—as it attempts to become the most popular switch overall.



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The network switch market is mature, and the pace of innovation among device vendors has tapered off considerably—along with the switch refresh cycle. That's good news for vendors like Cisco and HP, who have been in the switch business for decades, have built a solid reputation for delivering feature-rich products with lifetime warranties, and have cornered a huge share of the switch market.

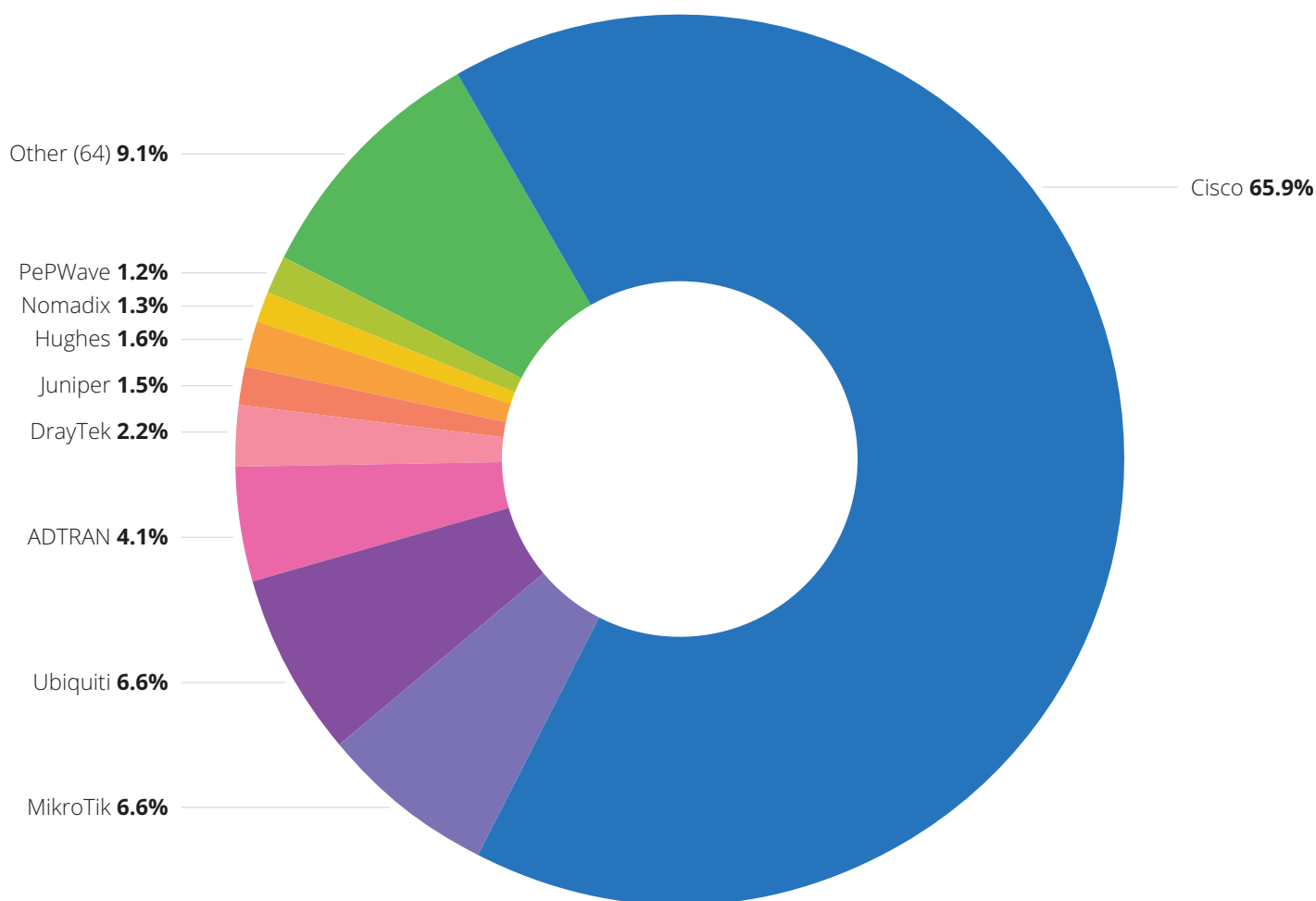
But it's a double-edged sword: Since innovation has slowed, most switch vendors are on equal footing for function. That means features aren't the biggest differentiator anymore: It's cost.

That's *not* good news for Cisco, which has historically been enterprise-focused in function and price—think the Cisco Series 9000 switch that retails for around \$5,000. For small- to mid-market MSPs, Ubiquiti and Meraki will be more attractive options during switch refreshes, since they offer high-functioning switches that don't break the bank.

Most Commonly Deployed Router Vendors

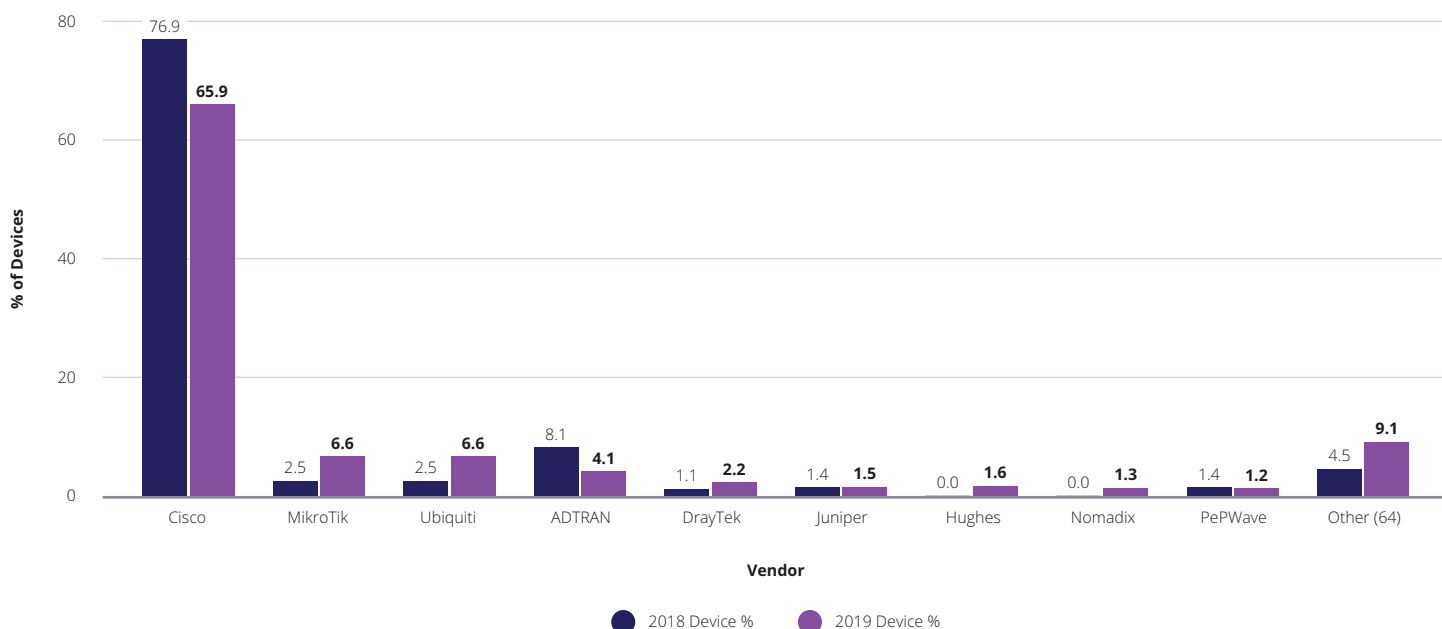
on networks managed by MSPs

Total number of vendors represented: **73**



While Cisco still sits atop the router category with a nearly 66% share, names like MikroTik, Ubiquiti, Hughes, and DrayTek are slowly eating into the company's previously dominant 76.9% share. But even with an influx of vendors—the router category is up to 73 vendors over 49 in last year's report—Cisco still maintains a healthy lead over its next closest competitor, MikroTik, at 6.6%.

DrayTek's appearance in the top five may come as a surprise, since the name is relatively unknown in the North American market. However, the vendor's prominence in Europe and Australia-New Zealand is enough to secure its spot among more well-known US vendors.



Biggest Shifts

	Small Networks % 2019		Medium Networks % 2019		Large Networks % 2019		Small MSPs % 2019		Medium MSPs % 2019		Large MSPs % 2019	
Cisco	↓ 22.0	55.7	↓ 3.8	67.7	↑ 2.5	83.0	↓ 7.2	59.3	↓ 5.7	68.3	↓ 18.5	64.8
MikroTik	↑ 4.4	6.1	↑ 4.1	9.2	↑ 1.6	3.5	↑ 9.0	15.0	↑ 2.0	5.5	↑ 1.9	2.3
Ubiquiti	↑ 6.7	9.5	↑ 1.8	4.9	↑ 0.1	1.3	↑ 2.9	6.6	↑ 3.3	7.4	↑ 4.2	5.4
Other (64)	↑ 8.1	12.9	↑ 4.1	9.2	↑ 3.5	6.6	↑ 2.6	10.1	↑ 3.6	11.0	↑ 8.3	10.2

↑ ↓ indicate % change from 2018

Cisco's hold on medium and large networks likely won't subside any time soon, but its 22.0% drop in small networks—largely in part to MikroTik, Ubiquiti, and the bottom 64 vendors' gains—is likely to cause some concern.



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Since the total number of routers across all networks is down from 5.9% in 2018 to 3.1% in 2019, it may be surprising to see 24 extra router vendors being accounted for this year. However, of the 64 vendors included in the Other category, 11 are SD-WAN vendors, including notable names like Citrix, Riverbed, and Silver Peak.

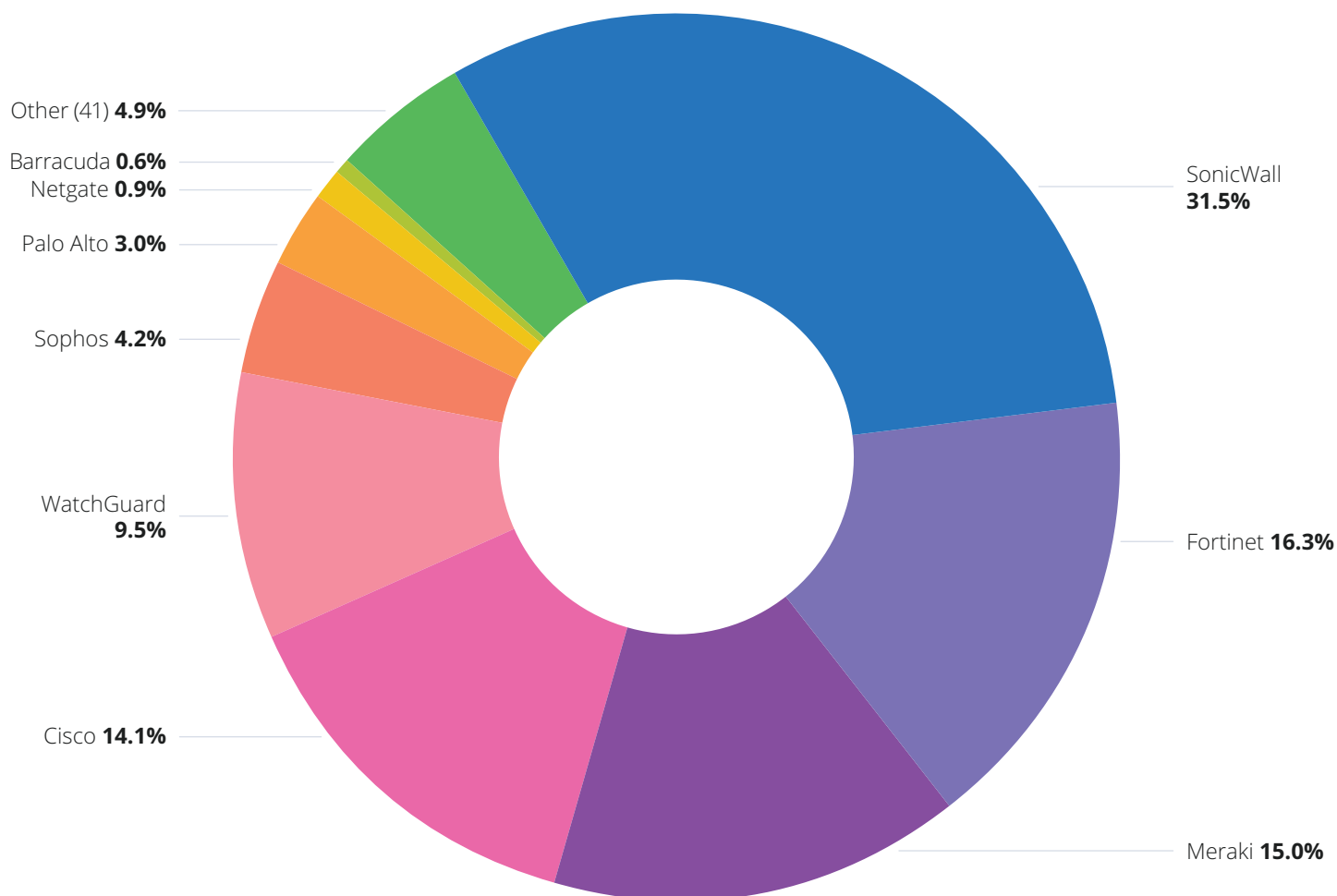
For network engineers, the switch to SD-WAN has several benefits: SD-WANs offer routing functionality and network security. They're also scalable and easy to deploy. And because SD-WANs are SaaS, there's no need to spend a significant chunk of the IT budget on high-cost hardware.

As a result, SD-WAN is projected to continue on its upward swing, while routers will continue to decline. Gartner says by 2020, more than half of edge infrastructure refreshes will include traditional routers being replaced by SD-WAN technologies.

Most Commonly Deployed Firewall Vendors

on networks managed by MSPs

Total number of vendors represented: **50**

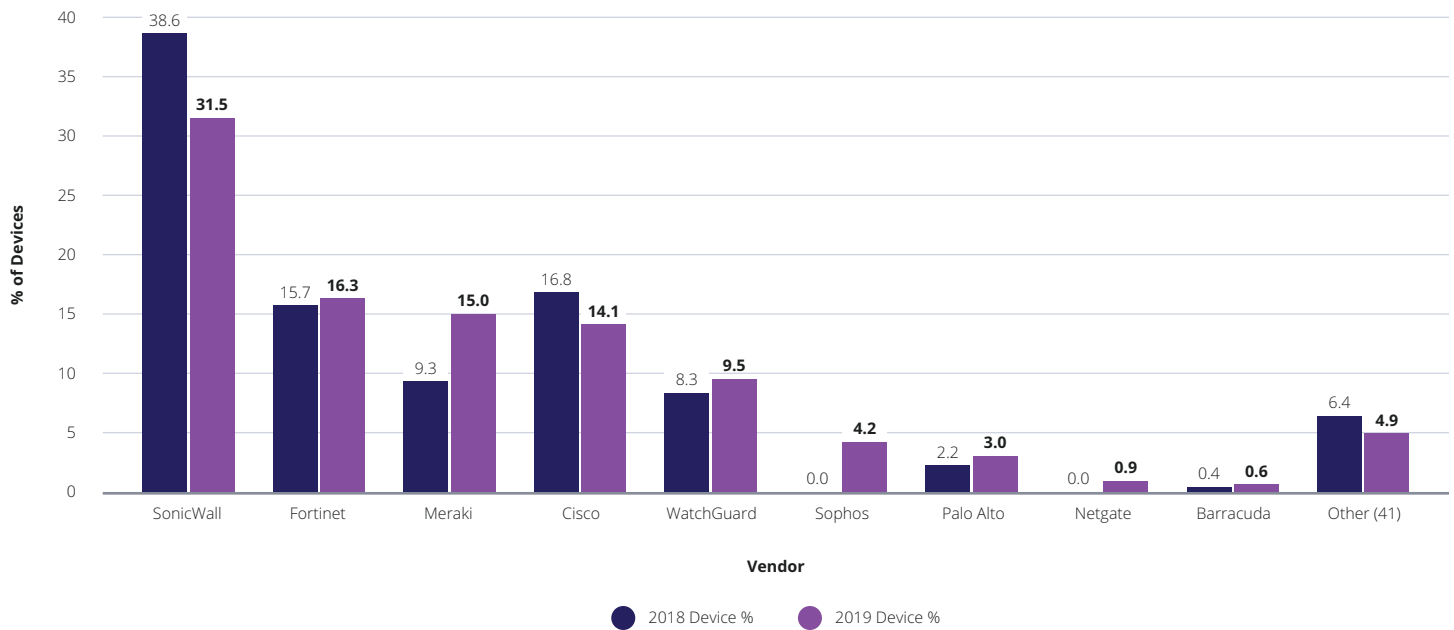


Firewalls remain the least fragmented network device category, with only three extra vendors being introduced. The lack of new entrants is likely a result of two factors: Networks often only need one firewall, making it a tough market to sell in, and the category is controlled by the top five vendors who account for 86.4% of firewalls.

SonicWall stays on top of the firewall category for another year with close to one-third of the pie, but it's down 7.1 percentage points when compared to last year. Its network share isn't necessarily shrinking though. In 2018, Auvik was still building out full support for Sophos and Netgate and had limited capabilities identifying them as device vendors—we've set them at 0 devices for 2018 as a result. Since Sophos and Netgate have added 5.1% to this year's report, SonicWall's decreased category share should be considered relative to the data.

Second, third, and fourth place among firewall vendors is tightly contested, with only 2.2% separating second place Fortinet and fourth place Cisco.

Cisco held the second spot in last year's report. In third is Cisco-owned Meraki. When the Cisco and Meraki numbers are combined, Cisco claims nearly 30% of firewalls across networks of all sizes.

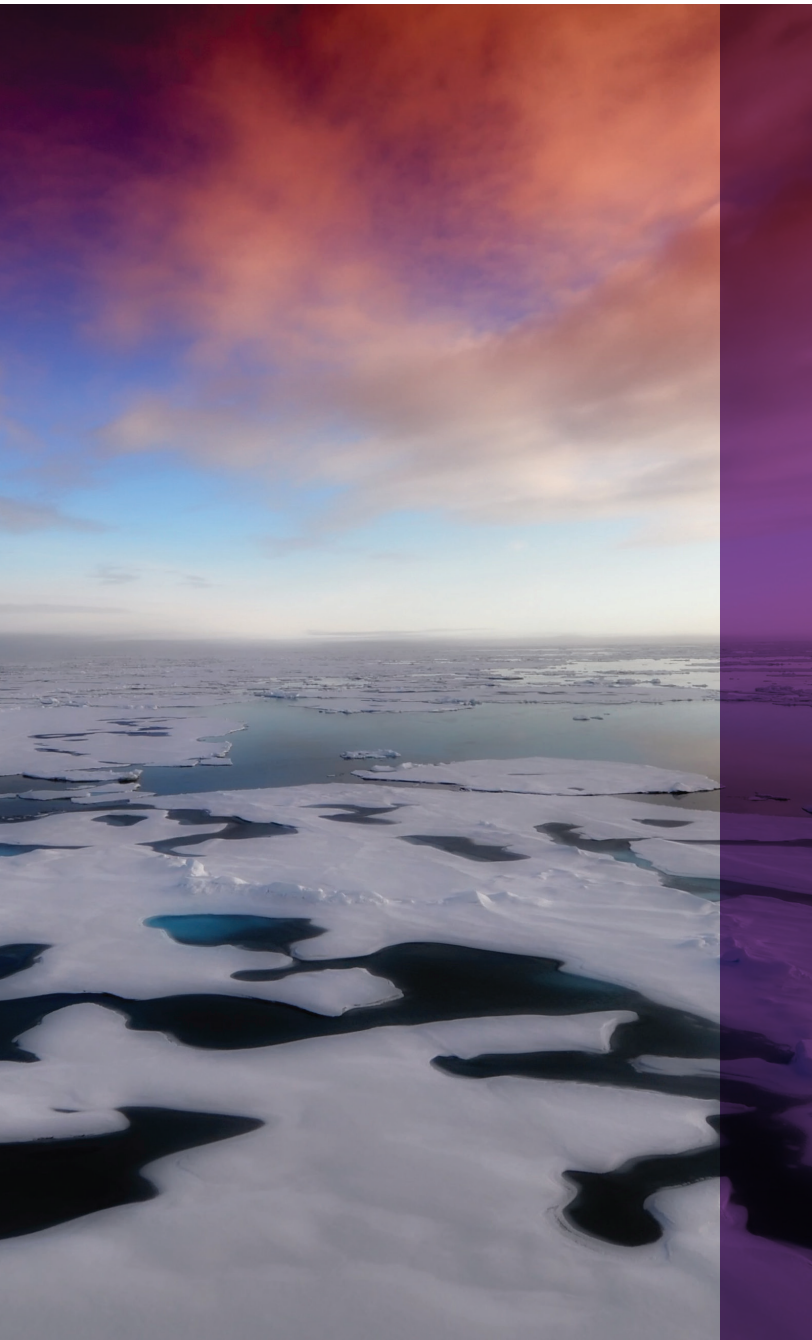


Biggest Shifts

	Small Networks % 2019		Medium Networks % 2019		Large Networks % 2019		Small MSPs % 2019		Medium MSPs % 2019		Large MSPs % 2019	
SonicWall	↓ 9.6	30.5	↓ 5.2	33.2	↓ 8.3	31.7	↓ 7.7	31.6	↓ 5.4	32.2	↓ 11.0	30.6
Meraki	↑ 4.0	14.4	↑ 5.9	15.4	↑ 10.1	17.2	↑ 5.7	14.3	↑ 3.2	13.4	↑ 8.1	17.4
Cisco	↓ 1.6	14.1	↓ 5.4	13.1	↓ 1.3	17.0	↓ 6.5	13.8	↓ 1.0	14.4	↓ 3.3	13.8

↑ ↓ indicate % change from 2018

The introduction of Sophos and Netgate didn't affect Meraki's growth, however. With new full stack products for small, medium, and large networks launched in 2018, Meraki is enjoying a boost from early adopters. As more MSPs adopt Meraki, their share across all categories will likely increase.



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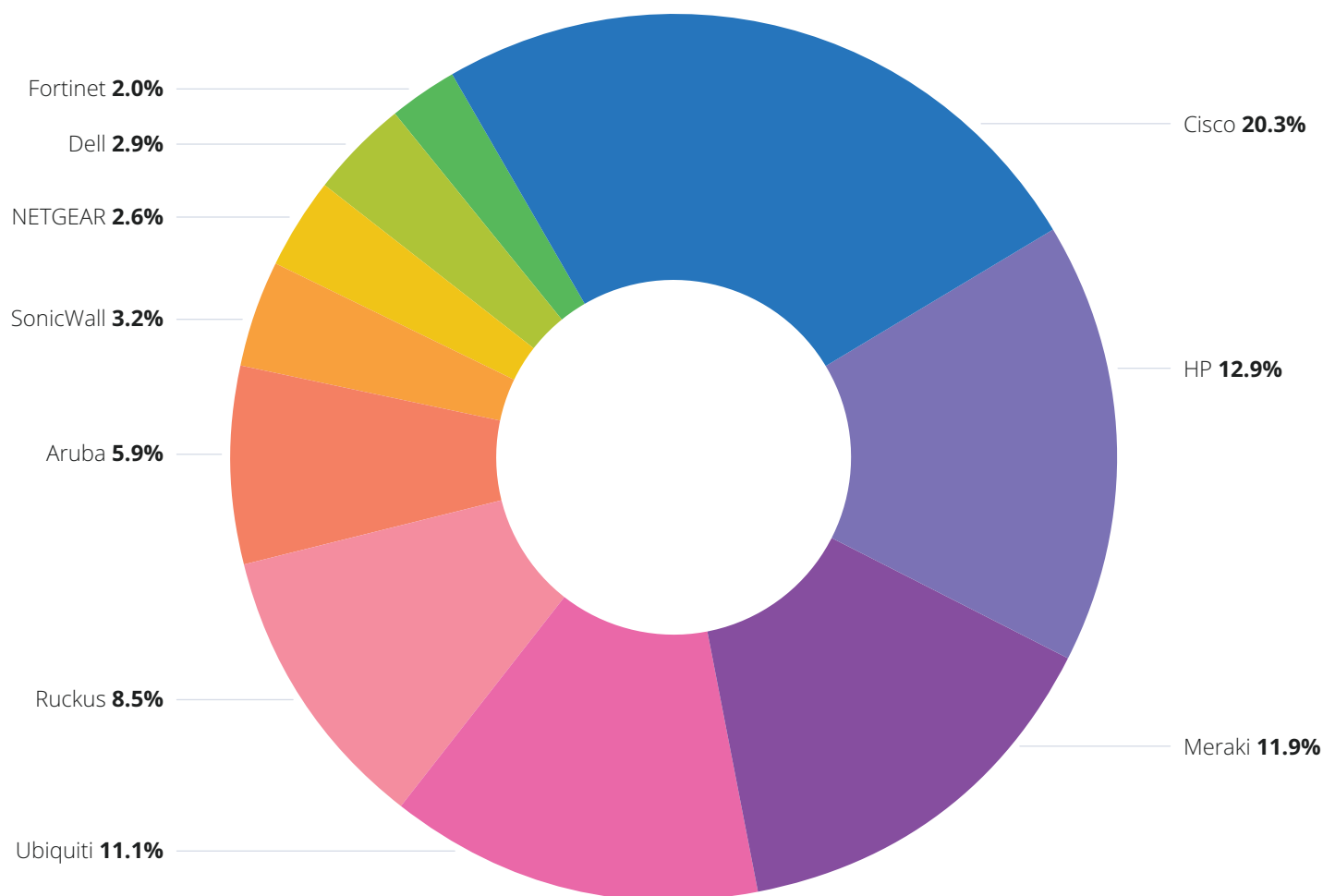
SonicWall firewalls are still considered best-in-class by many network engineers, so Meraki's growth in the category doesn't reflect a shifting opinion on SonicWall. Instead, Meraki's growth can be attributed to significant updates to its MX family's all-in-one, out-of-the-box package including next-gen firewall (NGFW) functionality, SD-WAN features, and Wi-Fi features. This convenient offering has allowed Meraki to overtake its parent company, Cisco, in the firewall category across networks of all sizes.

Cisco's shrinking category share can be readily explained: Out of the 98 Cisco ASA firewall models available, over 50 of them have reached end of sale status and at least 20 have reached end of life, with more to come by 2023. However, Cisco is introducing new firewalls to the market, like the Cisco Firepower NGFW, which was announced in June 2019. With this in mind, we expect to see one of two things happen with Cisco in this category next year: MSPs will either invest in Cisco firewall refreshes and boost the company's numbers, or MSPs will move on to other vendors, knocking Cisco further down the top 10.

Most Commonly Deployed Vendors Across All Network Devices

on networks managed by MSPs

When we combine all four network device categories—access points, switches, routers, and firewalls—deployed across networks managed by MSPs of all sizes, the dominant players clearly emerge. The list remains relatively unchanged from last year's report.

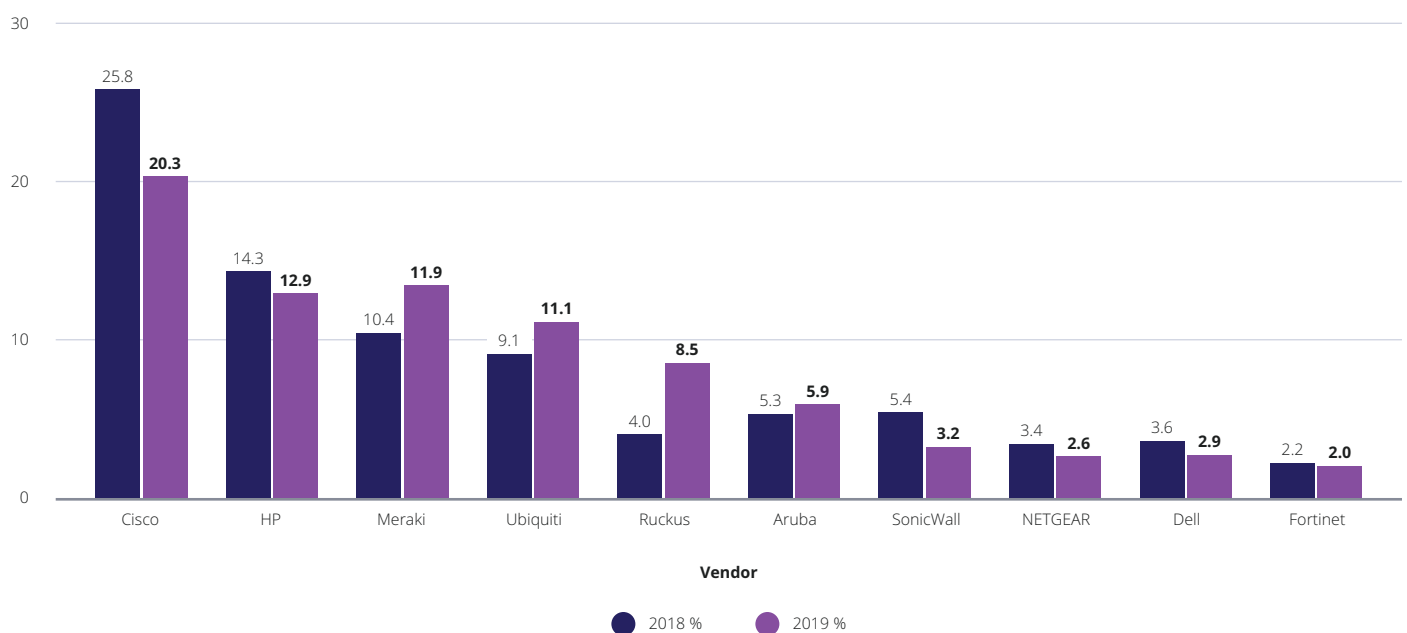


Cisco is the most deployed vendor in routers and switches, and the fourth most deployed vendor in firewalls. Meanwhile Cisco-owned Meraki sits second in the access point category and third in firewalls. Combined, Cisco and Meraki make up nearly one-third of the hardware deployed on today's MSP-managed networks.

Thanks to its dominant share in the switch category, HP holds second place. HP-owned Aruba grabs sixth place with 5.9% of deployed devices. When the HP and Aruba numbers are combined, HP claims 18.6% of total devices.

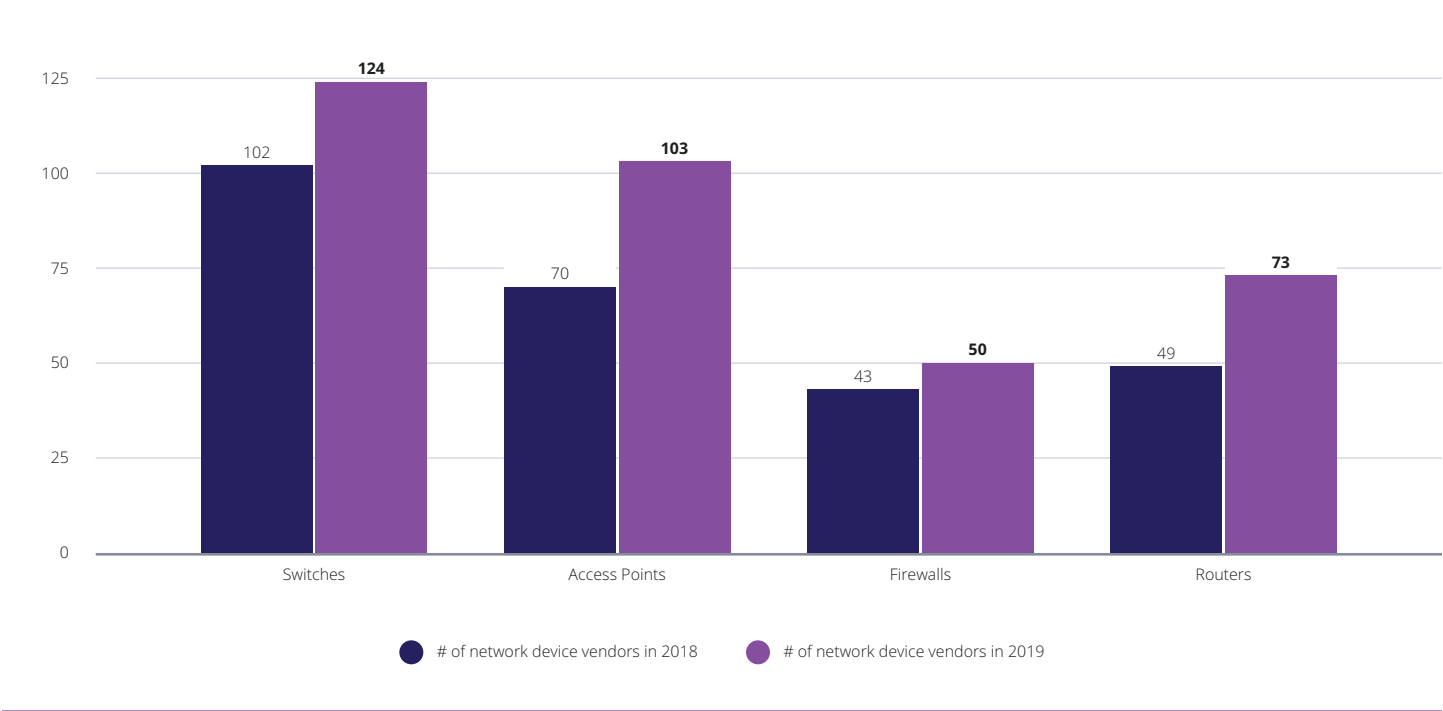
Ubiquiti combines its switch and access point numbers to claim fourth place, accounting for 11.1% of all network devices.

Meanwhile, Ruckus' stellar showing in the access point category accounts for the biggest change in the ranking—its 4.5 percentage point gain is enough to move it from seventh to fifth most deployed overall.



THE NETWORK VENDOR MARKET GETS MORE CROWDED

Number of Vendors per Network Device Type



The network hardware market is getting increasingly crowded, with 86 more vendors included in this report, and a minimum of 50 vendors competing in each category.

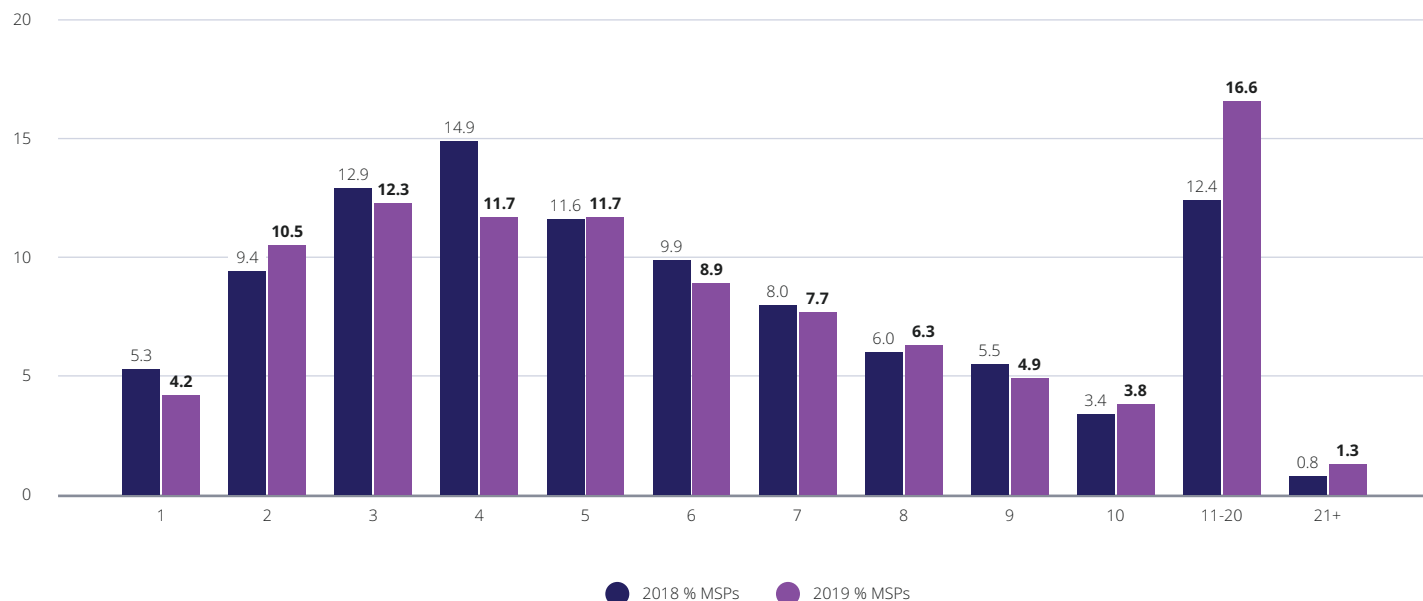
All categories experienced an increase in vendors: firewalls gained 7, switches were up 22, routers were up 24, and access points gained 33.

In each category, the top three vendors have cornered between 58.1% and 77.9% of the share, leaving dozens of vendors to fight for what's left.

NETWORK VENDOR DIVERSITY AMONG MSPs

Number of Network Vendors Managed per MSP

across all network sizes and MSP sizes



Median of Network Vendors Managed

All MSPs: **5**

Small MSPs: **4**

Medium MSPs: **8**

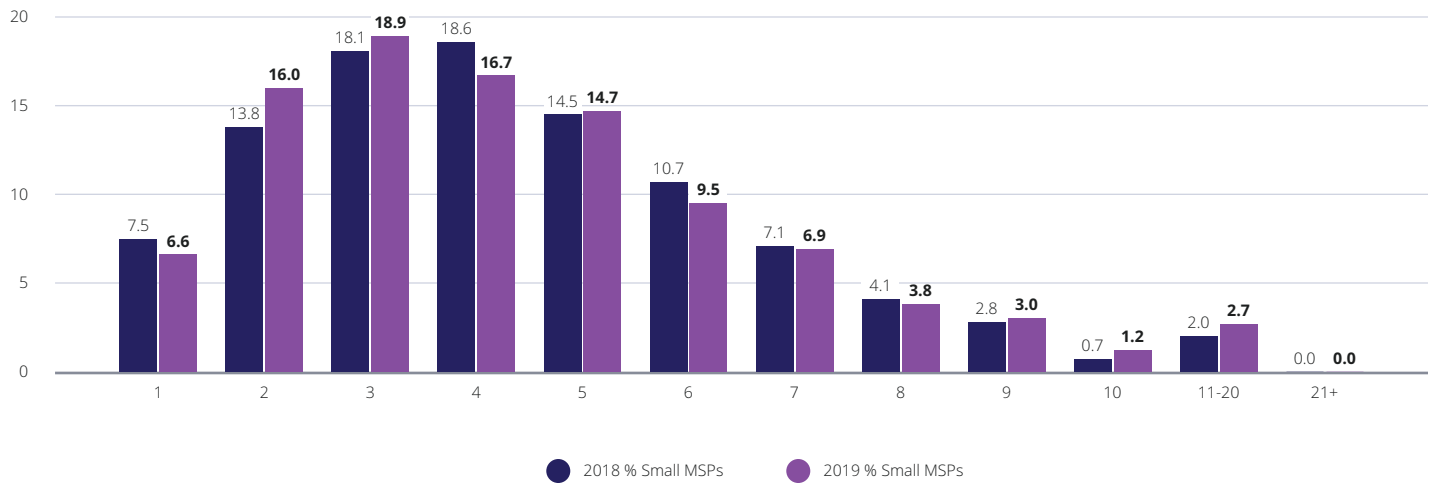
Large MSPs: **13**

Like last year, the average number of network vendors managed by an MSP varies significantly by MSP size.

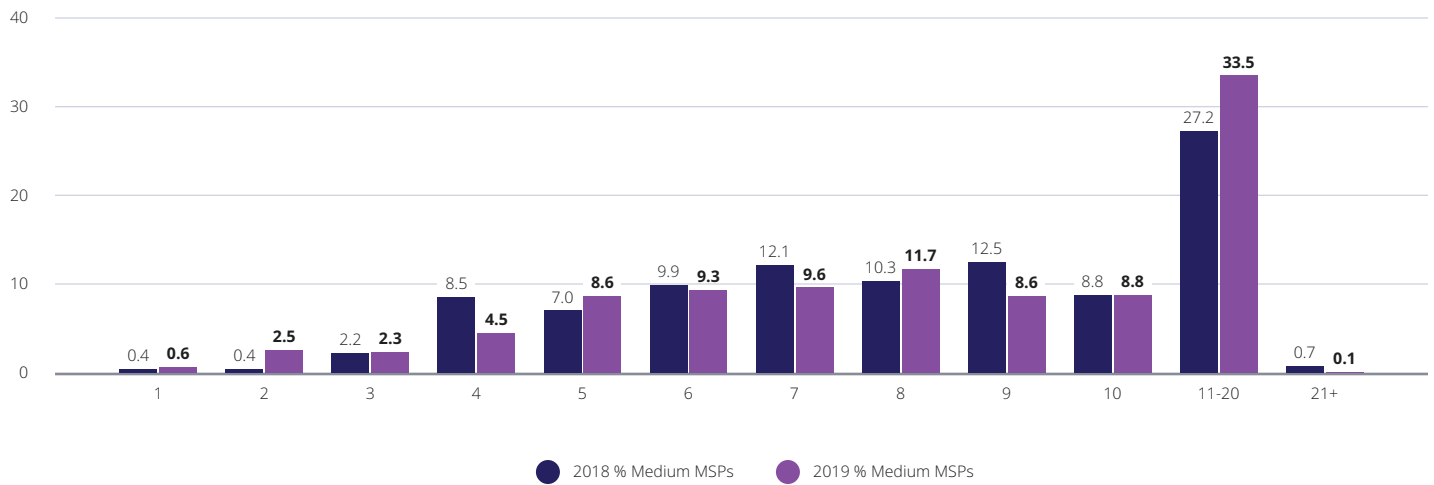
Regardless of size, more than 70% of MSPs are managing four or more network vendors per client. As an MSP gets larger, the number of network vendors they manage increases.

The biggest shift occurs in the 11 to 20 vendor bracket, which sees a 4.2 percentage point increase, meaning some MSPs are managing increasingly diverse networks.

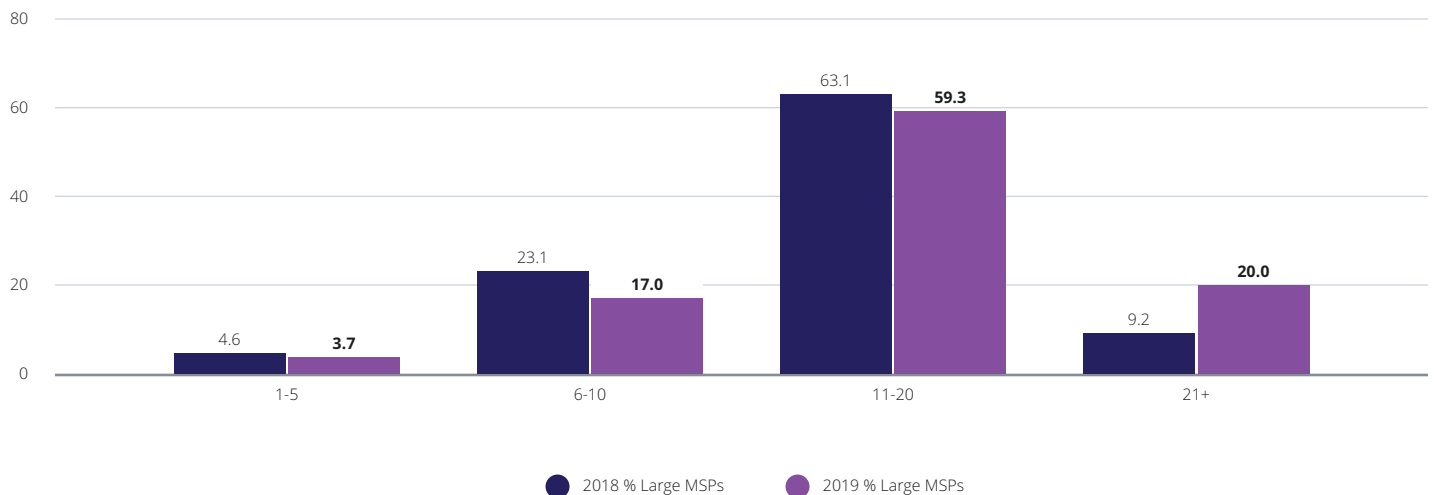
Number of Network Vendors Managed by Small MSPs



Number of Network Vendors Managed by Medium MSPs



Number of Network Vendors Managed by Large MSPs





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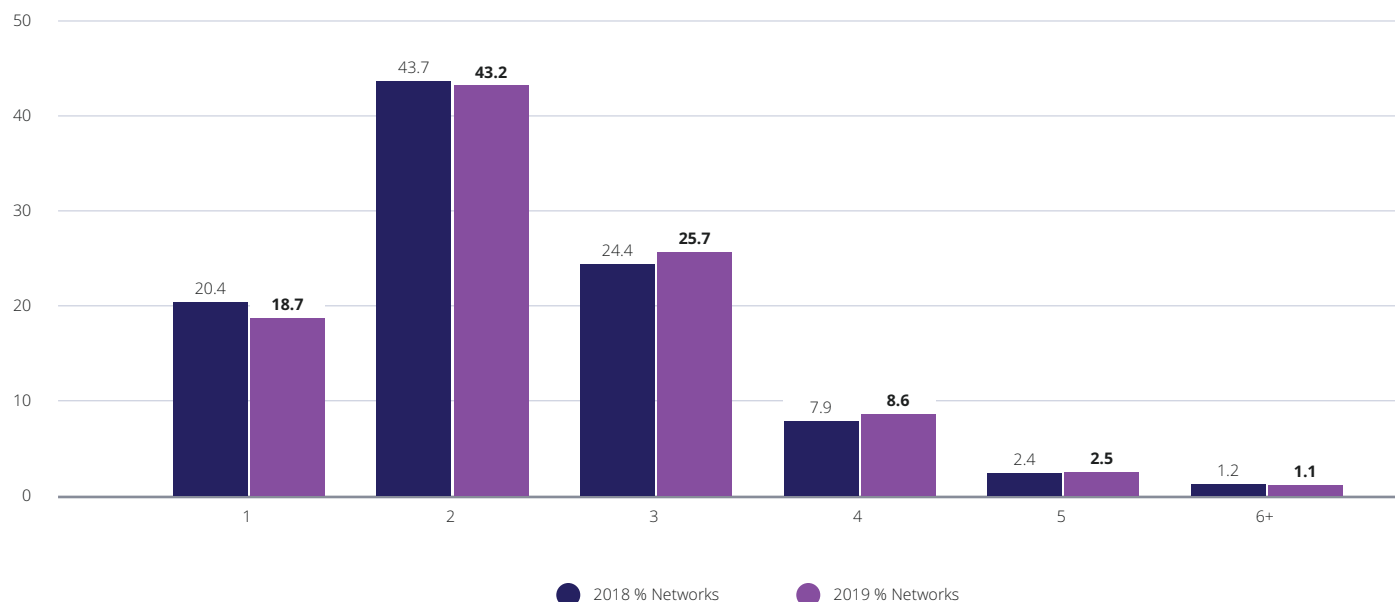
In 2018, the number of network vendors managed by MSPs pointed to a lack of standardization across their client bases. While the number in 2019 is still high, it hasn't increased, which is good news.

Standardization is a huge goal for many MSPs because of the benefits: Those who support a smaller stack can build deep expertise in specific vendors and define a set of standard operating procedures. A standardized network can boost an MSP's support efficiency and profitability.

The issue is standardization is difficult to achieve—it's costly, time-consuming, and convincing clients to rip out all of their old hardware to replace it with an MSP-approved vendor is a tough sell. As a result, network vendor diversity will continue for the foreseeable future.

Number of Network Vendors per Managed Network

across all network sizes and MSP sizes



Median of Different Network Vendors

Networks of all sizes: **2**

Small networks: **2**

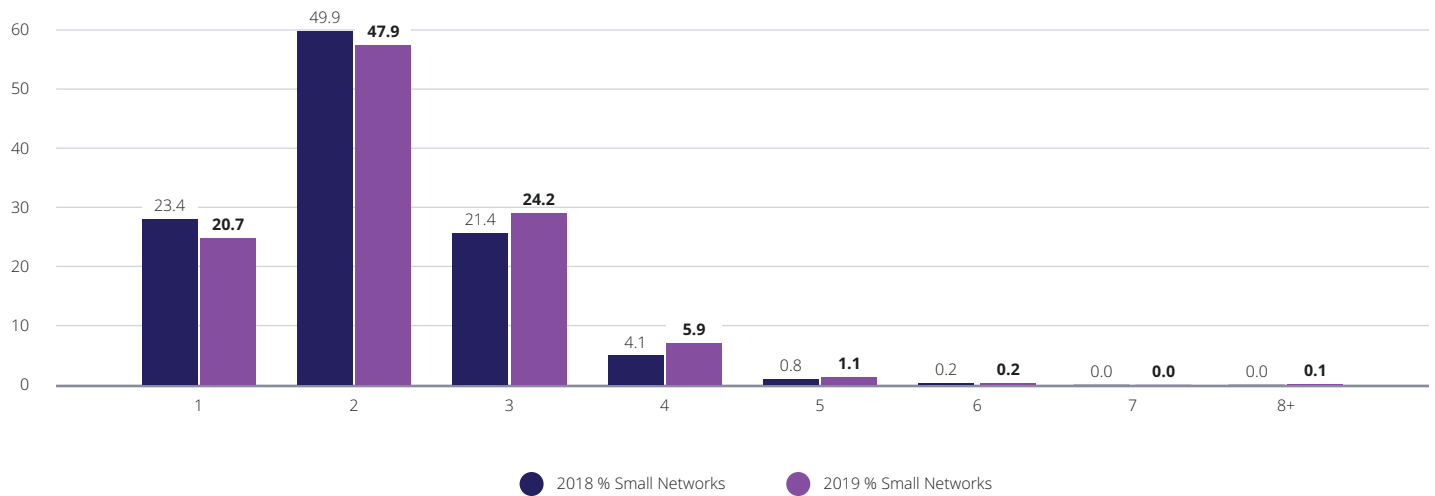
Medium networks: **2**

Large networks: **3**

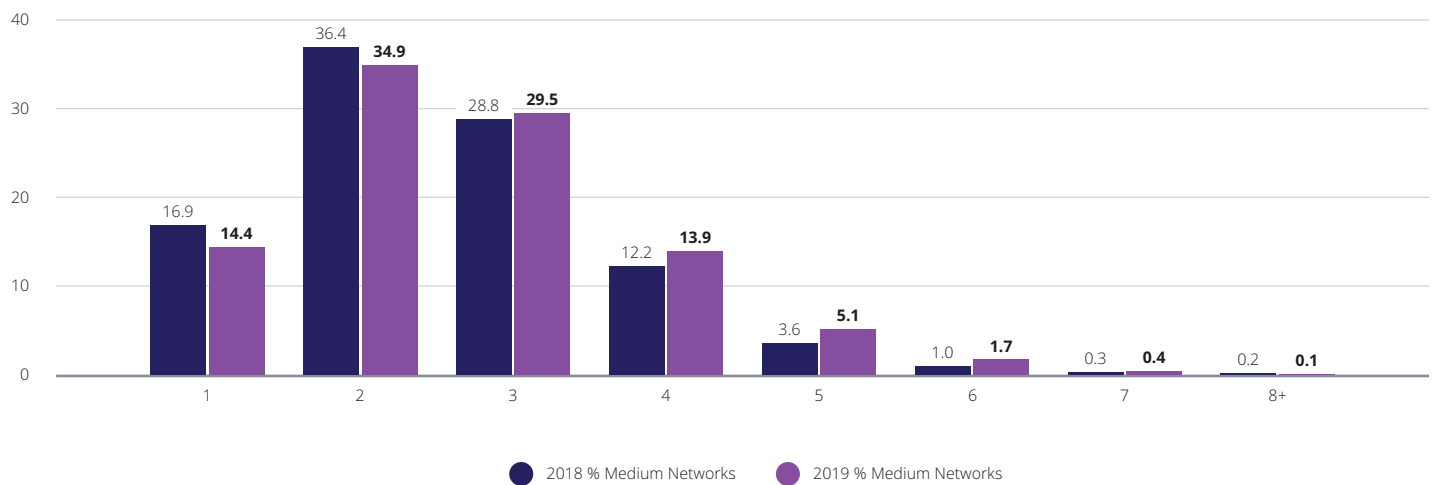
While MSPs are managing a lot of network vendors across all of their clients, the number of different vendors on individual small, medium, and large networks is relatively low. Regardless of size, almost 70% of networks have just two to four vendors present. The number of network vendors doesn't increase much as a network gets larger.

The only significant change occurs on small networks, where the average number of vendors typically deployed increased from one in 2018 to two in 2019.

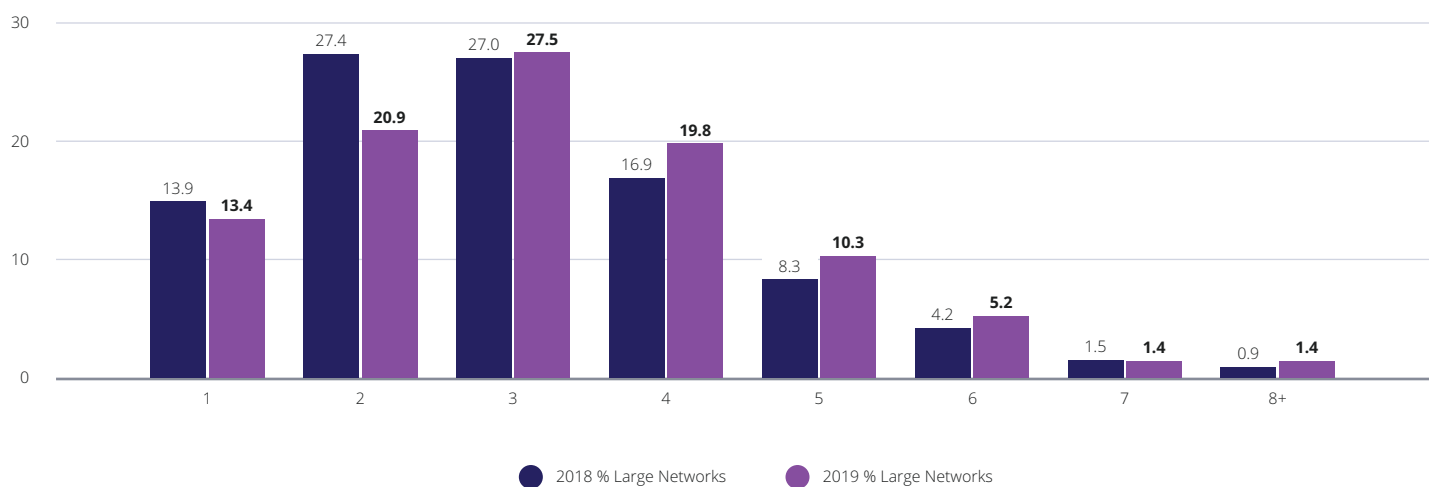
Number of Network Device Vendors Deployed on Small Networks



Number of Network Device Vendors Deployed on Medium Networks



Number of Network Device Vendors Deployed on Large Networks





★ AUVIK INSIGHTS

While the number of vendors on small networks is gradually increasing, there's no cause for concern yet.

As a small company and its network grows, they'll often add new devices without thinking too much about standardization. It's easy to end up with a firewall, access point, switch, and router each from different vendors. But tread carefully: If a company is left alone, they can quickly create a hodgepodge network that's harder to manage.

About Auvik Networks

Today, businesses expect their IT networks to just work. Kind of like electricity, silently functioning in the background.

When networks don't work, businesses grind to a halt. Because with everything in the cloud, networks are the gateway to what employees need to do their jobs.

To really own the responsibility of keeping the network running, there are three things a successful MSP needs to do:

- Know about network problems before their clients do
- Provide strategic guidance to evolve the network to meet their clients' business needs
- And minimize network risk to the business

Simple to say. Really hard to do in a way that doesn't kill your profit margins.

That's because network management is messy. It usually involves time-intensive manual tasks. Like typing commands into a CLI. Manually drawing network maps. Backing up device configs by hand.

What's worse, there are few standards. Thousands of device models from hundreds of vendors, all running different operating systems and working in different ways.

And staff who can manage all that network complexity for you? They can be hard to find and keep.

But now... there's Auvik. Auvik's cloud-based software reduces the complexity of managing a network to simple, automated steps.

With Auvik, you'll know about network issues before your clients do. You can give clients strategic guidance to evolve their networks to meet their business needs. And you'll reduce network risk.

All in a way that's efficient, productive, and profitable for you.

**Auvik is network management for MSPs.
Own the network.**

