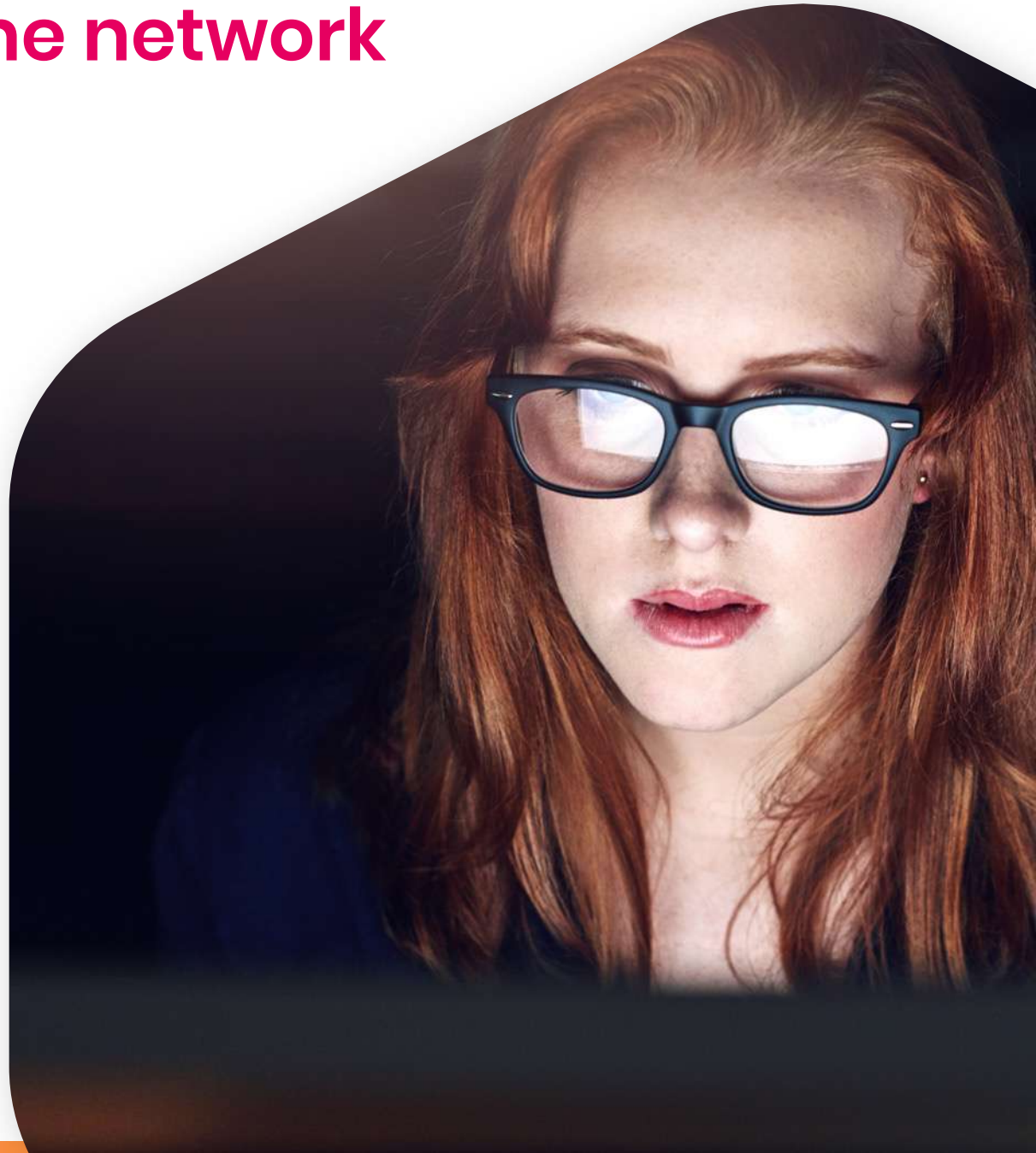
# Supporting a work from home network

Get more from your digital experience monitoring and optimization solution

May 2022

# Supporting a work from home network

- People are working from home
- Home networks have problems
- Troubleshooting is complicated
- ControlUp makes troubleshooting easy
- ControlUp for physical desktops
- ControlUp for virtual desktops
- Conclusion



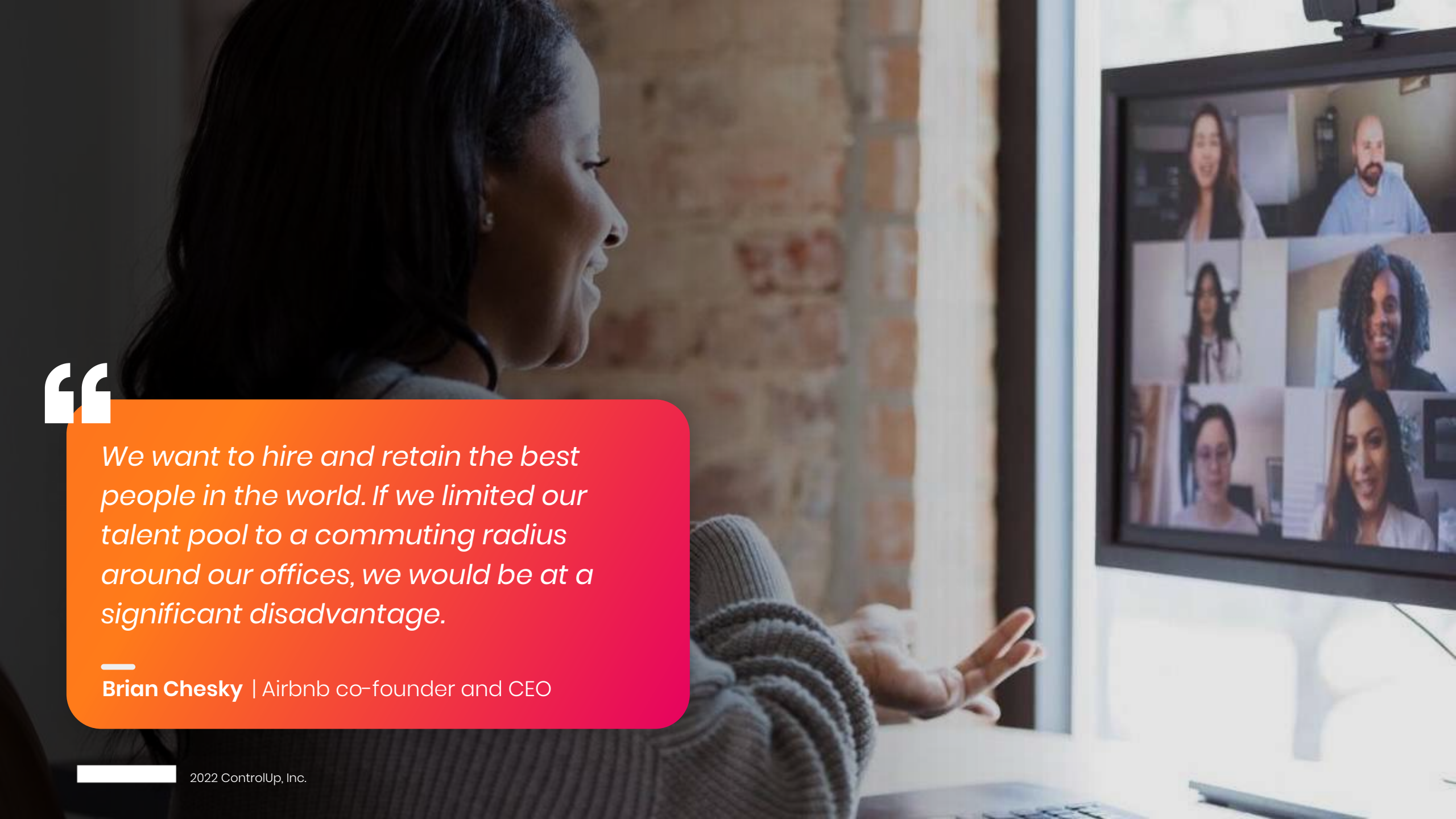
Working from home benefits employees and business

# People are working from home

Most companies support employees working from home, either on a full- or part-time basis, and are benefiting in areas like talent acquisition and retention, employee productivity, and product innovation. Supporting employees working outside the office can be costly. “Why?” you might ask.

Corporations purchase management software for office networks, servers, and applications, and even extend management to laptops to reduce support costs. However, most management tools don’t address the most significant technical problem while working from home: the home network.

The home network is invisible to IT, and any attempt at troubleshooting its issues can feel like trying to throw darts in the dark. According to a recent Zendesk blog, average weekly support requests are up 20 percent since 2022, which means that the IT department is spending more time and money to ensure remote environments stay connected.



*We want to hire and retain the best people in the world. If we limited our talent pool to a commuting radius around our offices, we would be at a significant disadvantage.*

**Brian Chesky** | Airbnb co-founder and CEO

Home networks are invisible to IT

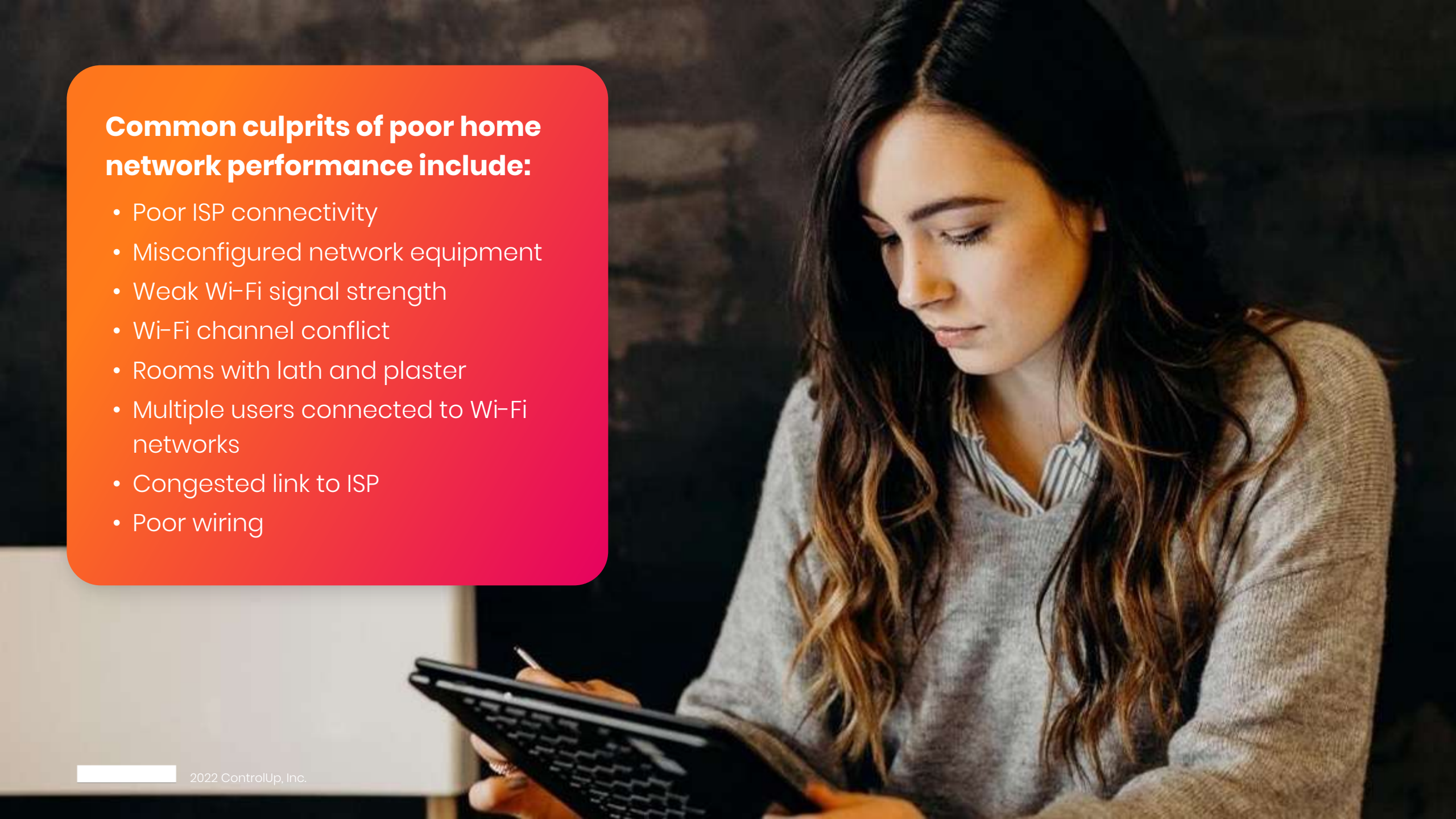
# Home networks have problems

Home network issues result in several connectivity problems we are all too familiar with, including slow or no internet connectivity, long virtual application load times, router problems, SaaS and web application latency, and interrupted video calls. The result of these network latency issues can severely affect work productivity and frustrate employees. According to an article published by the New York Times, the number-one, work-from-home tech issue is internet connectivity, which includes an unreliable Wi-Fi signal, and slow internet speeds.

What makes connectivity more difficult is the fact that most at-home network equipment is consumer-grade and unmanaged, which means that your IT department doesn't have credentials to access it. This leaves IT in the dark, making troubleshooting network issues more difficult and time-consuming.

Common culprits of poor home network performance include:

- Poor ISP connectivity
- Misconfigured network equipment
- Weak Wi-Fi signal strength
- Wi-Fi channel conflict
- Rooms with lath and plaster (these substances impede Wi-Fi signals)
- Multiple users connected to Wi-Fi networks
- Congested link to ISP
- Poor wiring



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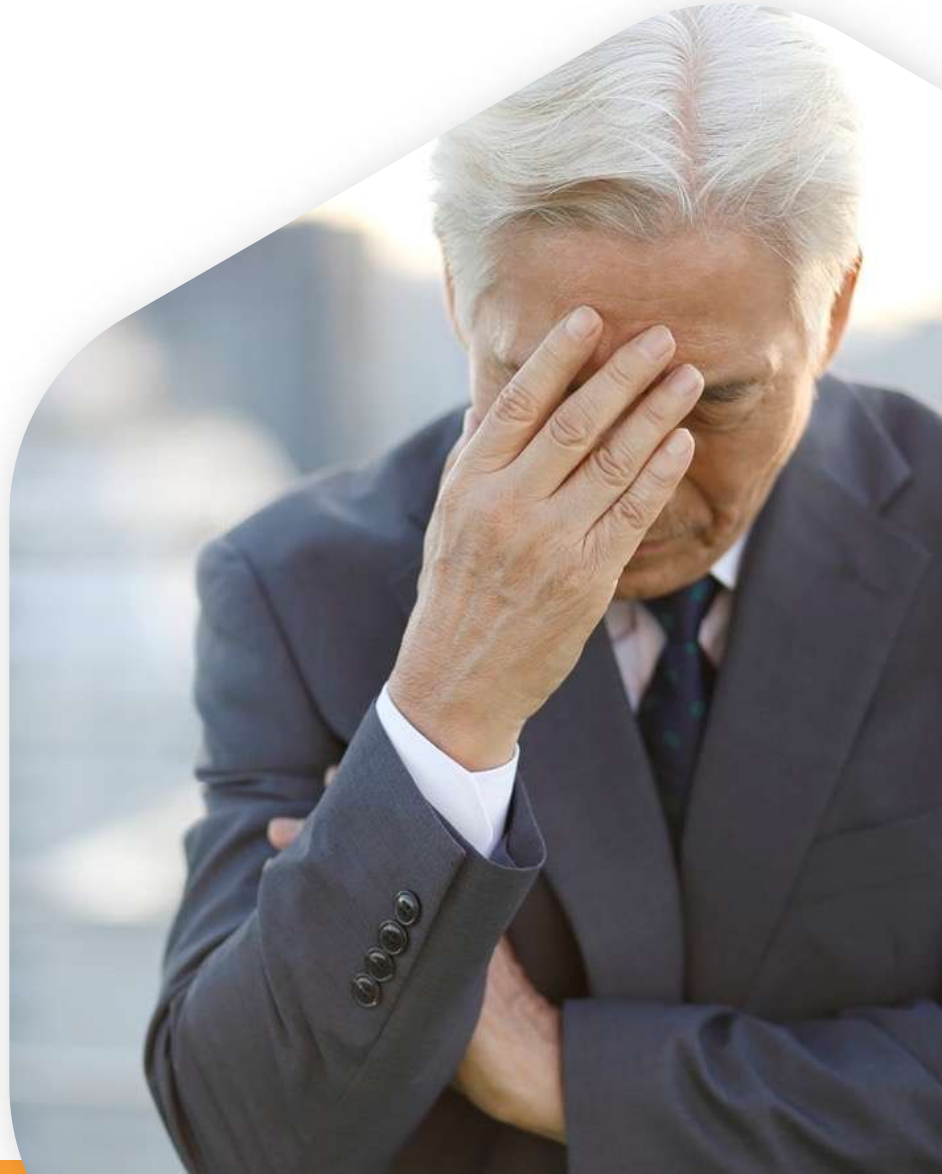
Remote networks are blind to IT

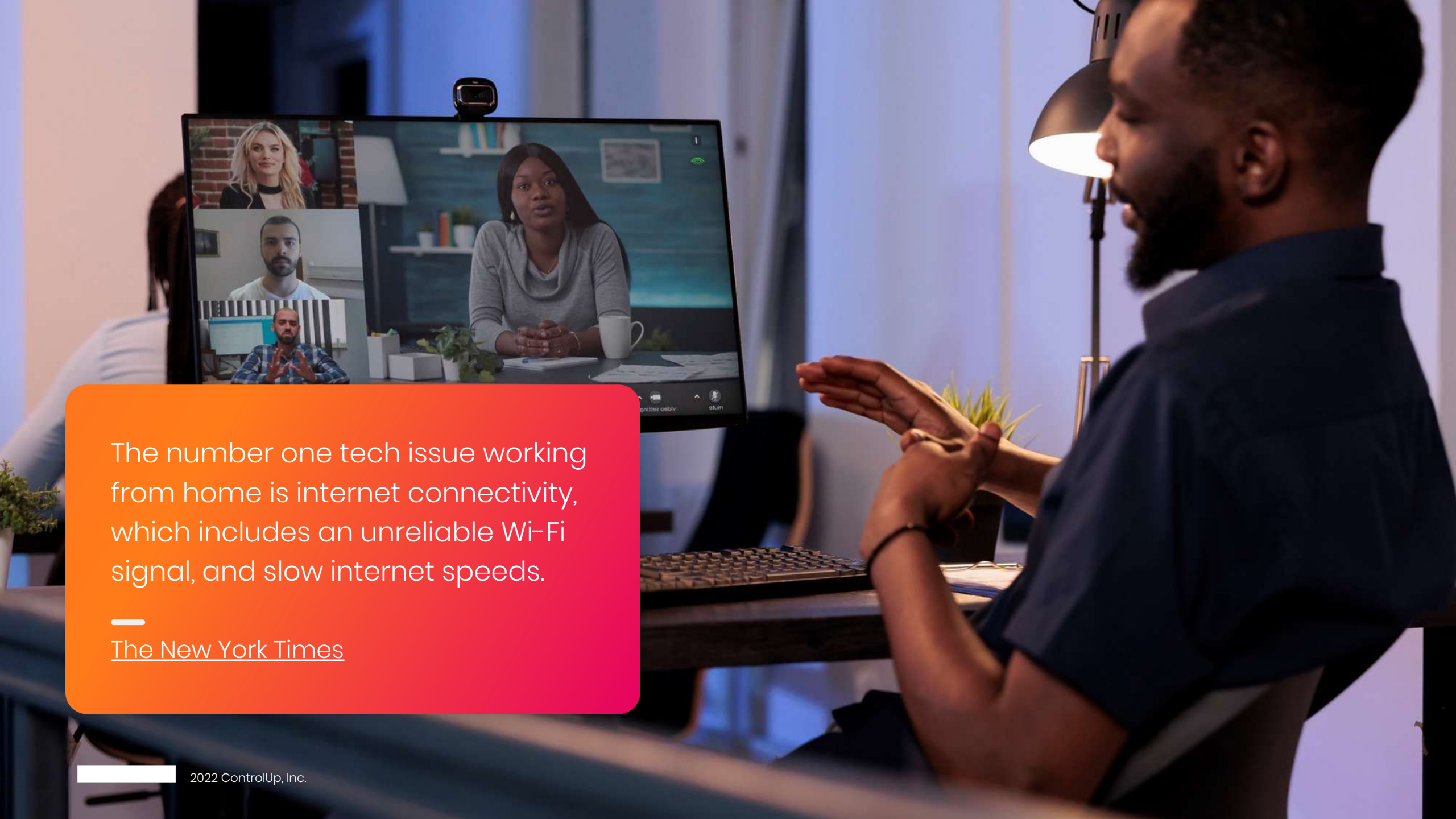
# Troubleshooting is complicated

So, how do you troubleshoot an unmanageable network? As in life, there is always the easy way and the hard way, and the hard way is manual troubleshooting. On a typical help desk call, an IT service desk will walk an employee through the following steps:

1. Run ping and ipconfig to give the support admin a baseline of information about the local computer.
2. Run nslookup to understand if the computer can obtain a DNS server automatically.
3. Perform OS patching, check CPU and hard drive health, then check the firewall configuration.
4. Download tools like Network Performance Monitor or ManageEngine OpManager, then analyze remote network traffic patterns to see if there is a network security breach, virus, or rogue applications that could affect network performance.

While these are great tools, they only provide information about a moment in time with no historical record of what happened when there was a problem. This makes it difficult for the support admin to perform the root-cause analysis that could prevent issues in the future.





The number one tech issue working from home is internet connectivity, which includes an unreliable Wi-Fi signal, and slow internet speeds.

The New York Times

ControlUp shines the light on home networks

# ControlUp makes troubleshooting easy

ControlUp gives IT visibility into the last mile of networks for physical devices and virtual desktops. Our digital employee experience management platform collects network metrics of endpoint devices running virtual sessions on Citrix, VMware Horizon, Azure Virtual Desktops, or on physical endpoints like Mac, Linux, IGEL, and Windows devices.

Included in the home network metrics captured by ControlUp:

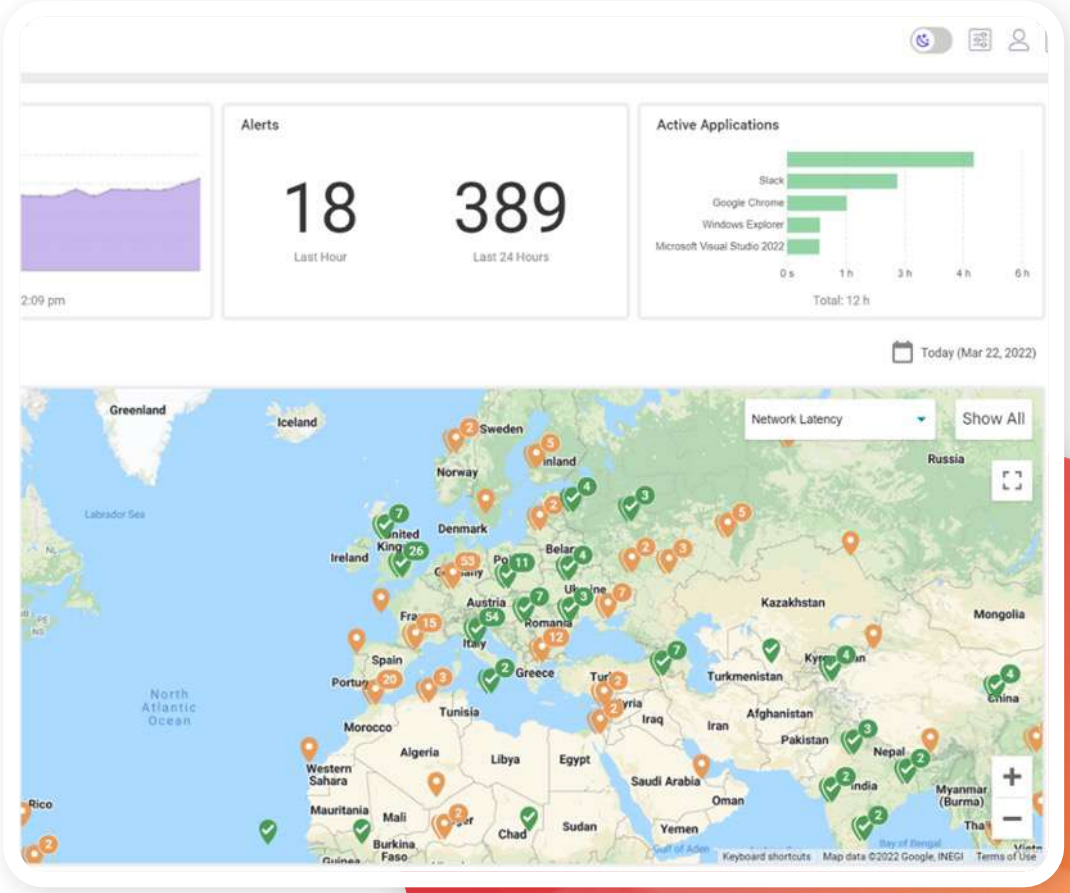
| | |
|---|---|
| Wi-Fi signal strength | Network latency |
| Wi-Fi access points | Wi-Fi mesh identification |
| GEO location | Device location history |
| GEO location from ISP | Remote IP |
| Country from IP | Network adapter type |
| MAC address | Name of ISP |
| Hourly network usage (MB) | Network usage (MB/s) |

Troubleshooting home networks

# ControlUp for physical desktops

Every location presents different networking challenges, which makes ControlUp's Edge DX management dashboard for physical devices the perfect tool for viewing the health of your employees' digital experience, no matter where they choose to work. Look at the image below, which shows regions where people have network latency issues and offers other ways to easily find other issues affecting the digital experience.

Whether running Windows, macOS, or Linux, ControlUp provides hundreds of out-of-the-box device metrics—and the flexibility to add 100s more—to help you quickly assess the digital experience of your employees' endpoints.




Linux

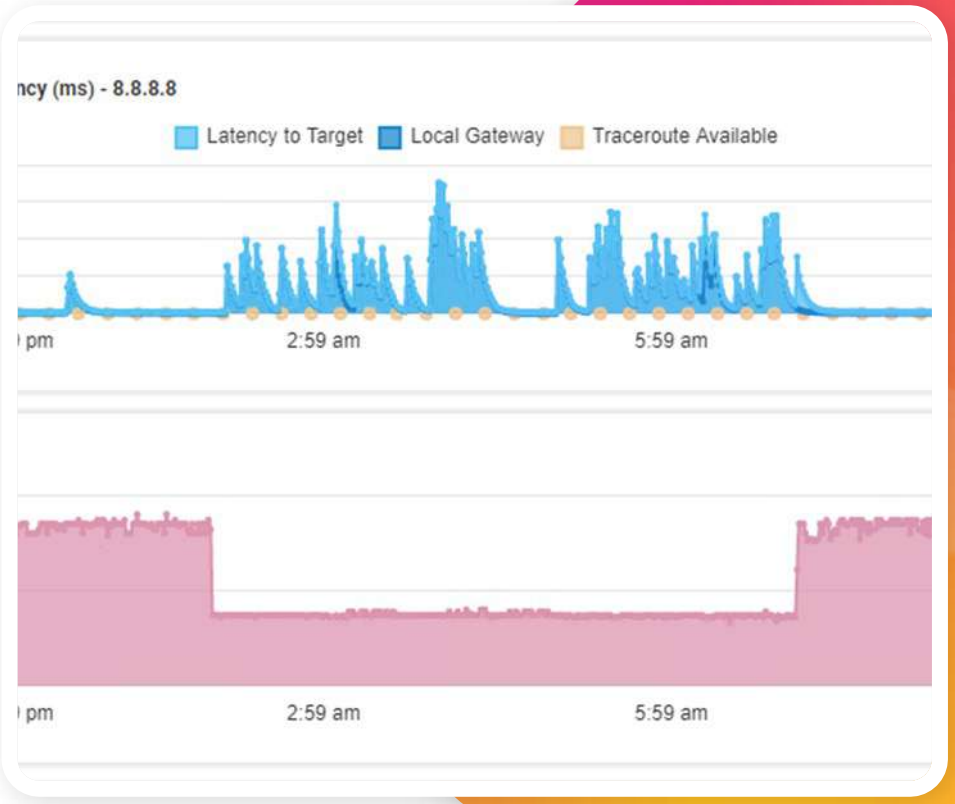
Microsoft

# ControlUp for physical desktops (cont.)

Edge DX collects data about remote networks and can give recommendations based on what is happening. For example, because a Wi-Fi signal strength of about 60% can reduce overall performance by 80%, Edge DX is intelligent enough to measure the Wi-Fi signal strength and then notify a user to move closer to their router to improve their experience.

Another way that Edge DX can enhance the overall user experience is that when there is network latency, it notifies the admin about traceroutes to definable targets and displays them in a graph to help them better understand which users and locations have latency issues. Ever wish you knew which ISPs your employees are using? Edge DX delivers a report, and you can use this information to negotiate better rates and speeds for your employees.

Take a look at the screenshot of an Edge DX dashboard. It highlights a block of time during which a device had a weak Wi-Fi signal that caused spikes in latency. This information can help admins find probable causes of this network latency and prevent future downtime.

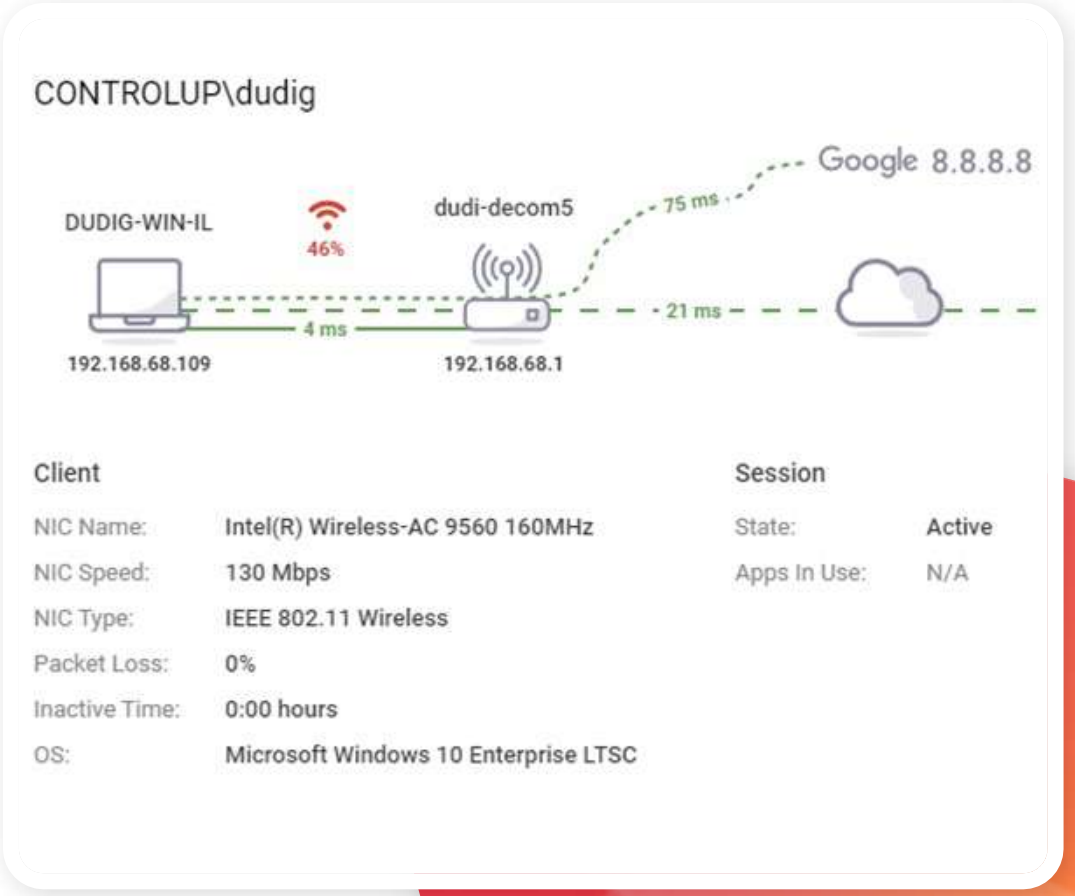


Troubleshooting home networks

# ControlUp for virtual desktops

The world of virtual desktop infrastructure (VDI) is on the rise. According to Global Market Insights (GMI), the VDI market is expected to grow by 20 percent by 2028. But again, the weakest point of working in a VDI environment is the last-mile home network. Thankfully, ControlUp Real-Time DX gives IT admins a view into the performance of a home network, so employees working remotely can enjoy stable connectivity, consistent uptime, and a positive digital experience.

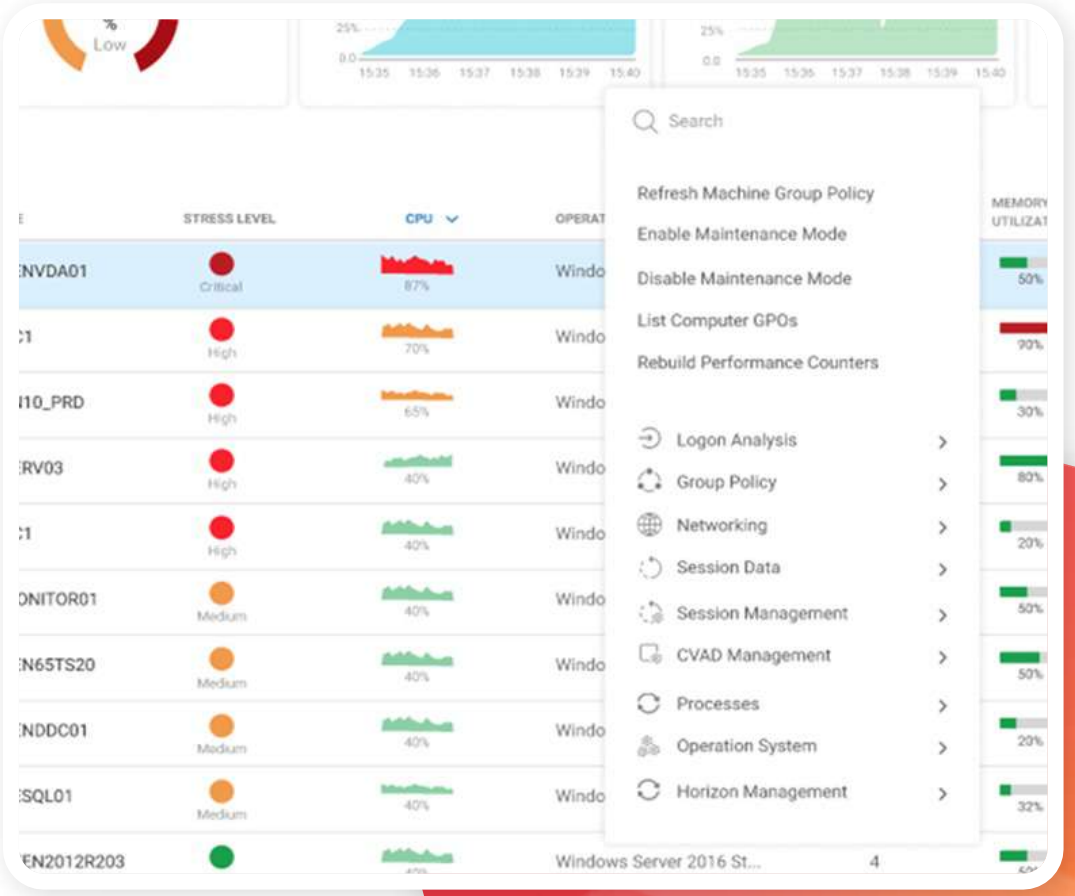
The screenshot to the right is a view of detailed metrics of the client to the VDI gateway in the Real-Time DX console.



Troubleshooting home networks

# ControlUp for virtual desktops (cont.)

ControlUp presents thousands of real-time performance and usage metrics presented in intuitive dashboards. This gives IT teams end-to-end views of the health of their EUC environment from the back-end servers to the endpoint on a home network. ControlUp's unique Virtual Expert™ technology, combined with an extensive script library, allows IT teams to quickly perform a root-cause analysis and remediate issues, either manually or through automation. You can see some of the real-time metrics captured and displayed in the screenshot to the right.



# Conclusion

While working from home gives employees the flexibility to enjoy a healthy work / life balance, working from home also makes it possible for businesses to hire and keep top talent in the market. However, home networks pose a support challenge for IT staff.

This is where digital experience management solutions like ControlUp Edge DX, for physical endpoints, and Real-Time DX, for VDI and DaaS environments, can help. They give IT increased visibility and control and make supporting home networks for virtual and physical devices simple. That way, employees are assured a positive digital experience wherever they choose to work on whichever type of device they use!

Want to give ControlUp a try? It is easy. ControlUp can be up and running in your environment in less than 10 minutes!

Download free trial

Request a demo