The Fiber Download

How To Enhance Remote Work And Learning

The dynamics in our homes have changed drastically this year. While some of our members have worked from home for years, others are seeing remote work as their 'new normal'. And families are further impacted as schools struggle with reopening and remote learning.

Before the pandemic hit, a home's network and the broadband feeding it was primarily used for streaming movies, watching YouTube, playing games or simply checking email or social media. This new normal is now putting pressure on your home network as it adapts to adding working and learning from home. Parents may both need to be in a Zoom meeting for work, while at the same time their kids are also participating in classroom Zoom learning sessions.

Your network is now mission critical for daily survival. You need to work, your kids need an education and it's time you get the most out of your internet service.

The MVlink team is here to help guide you. Over the next few issues of The Fiber Download we will cover three major, related topics including: Understanding your bandwidth, understanding Mlink's service and optimizing your home network.

Understanding Bandwidth

Think of drinking a milkshake through a straw. It's a bit more difficult than sipping your favorite soda. You either need to put a bit more effort into it, or you need a larger straw.

Internet data is very comparable. A simple email message requires very little bandwidth because there is very little data associated with it. But a 4k video stream requires considerable bandwidth because the data files are so large.

In reality, you could watch that video with any bandwidth capacity, even with an older dial-up service, but you would first have to download the entire file first and wait hours, even days for the full video to load. Our current lifestyles are always wanting instant gratification; we just want to click on the video and watch it now. This means your internet bandwidth needs to be wide enough (like the straw) to accommodate all that data (like the milkshake).

Measuring Bandwidth

Emails and basic web surfing consume a relatively small amount of bandwidth. Photos, music and gaming consume much more. However it's video that creates the greatest need for bandwidth.

Bandwidth is measured in megabits per second (Mbps) and equates to millions of bits per second. Netflix, for example, says the absolute minimum bandwidth it needs is 0.5 Mbps and users will experience a heavily buffered, low resolution video. In comparison, you will need 20 Mbps to stream a 4K movie with clear resolution and no buffering.

Fortunately most streaming services let you choose the quality of video (and therefore the bandwidth you use), or they can automatically stream your video based on your existing bandwidth.

In a household where maybe one movie and one You Tube video were running at the same time, your network may have been just fine. But in our new normal, when both parents are uploading and downloading work files while their kids are Zooming with their teachers or friends, your network is under pressure to perform.

Next Month: Understanding What You Are Buying

Glossary of Terms

Megabits: Written as Mbps (with a lower-case "b") That's millions of bits per second.

4K: The term is a shorthand, refer to the approximate horizontal display resolution of the set . The standard resolution of 4K TVs is 3840 x 2160 pixels, four times the pixel count of your now-aging 1080p HDTV.

Zoom requires both upload and download bandwidth

Chart (UP / DOWN Mbps):
- Minimal Netflix
- SD 480p
- Zoom
- HD 720p
- HD 1080p
- 4K Streaming

X-axis: 0 2 4 6 8 10 12 14 16 18 20

UP / DOWN (Mbps)