

Due to the growth of wireless networking there follows a growth in support calls, blame and projects to make wireless “work better”. There are a number of tools in the market place ranging from free apps for your smart phone to detailed analysis tools and there is always some confusion about which one is right for you. Here is our advice:

Tools for before you deploy wireless

AirMagnet Planner Software for a laptop – simply input a scaled drawing of the area/floor that requires wireless coverage, specify the wall types and let the product work out how many and the location of the required Access Points. The main difference between the cheap and the expensive tools here is the quality of the reports at the end and how selective you can be about the different AP types and antennas you want to deploy.

AirMagnet Spectrum XT Software for a laptop with a specialist USB NIC card - input a scaled drawing and walk around the area in question, the product produces a map of the levels of interference present. This covers all WiFi sources and non WiFi devices that produce noise that can affect your network, classifies them and allows pin-pointing of their location.

Tools for after wireless deployment

Troubleshooting tools – First line support

Free Smartphone Apps These tend to be signal strength indicators with SSID information and can prove if basic signal coverage is there or not. Issues here are that Smart Phones are not very consistent in measuring signal strength so accuracy is poor (a difference of 3db represents a doubling/halving of signal strength). The speed at which a laptop connects is more a function of signal to noise ratio than just signal strength so there are a number of factors involved in knowing whether you have useable wireless coverage or not.

Handheld Tools Such as Fluke Networks AirCheck and OneTouch – specialist tools are built for the purpose so the accuracy is better and there are dedicated screens to display the relevant information. The Fluke Networks tools are quick to boot and can give the extra layers of detail (signal, noise, AP configuration, clients connected etc.) to make it easier to understand what’s going on.

Specialist Wireless Packet capture tools for you laptop

AirMagnet WiFi Analyser Software for a laptop - Most packet capture tools will bind to the Wireless NIC and give some information as to the packet types coming through. Very few capture products have a range of specialist displays and expert help databases to guide you through the piles of information presented. WiFi Analyser is not for the faint hearted, but it does have a series of specific screens aimed at sorting out the different aspects of wireless performance to make it easier to understand what’s going on.

Producing heat maps of current coverage

AirMagnet Survey

Software for a laptop, input a scaled drawing of the area and walk around with your laptop (make sure you go into as many offices and meeting rooms as you can), the product produces a series of coverage, performance and noise reports showing an overview of how effective the wireless coverage really is at every point. These heat maps are very effective in highlighting the corners of the building where coverage is weak or some outside source is affecting your network.

24 x 7 Monitoring

AirMagnet Enterprise

If the wireless network is critical to the business and you need to show it's monitored it at all times for performance, security or compliance purposes then Air Magnet Enterprise involves installing a series of sensors into your wireless locations. Results are pulled into a central overview dashboard. This solution helps you gather data about an incident before the phone rings, so you can start the troubleshooting process straight away rather than deploying someone to gather some data first.

Performance Testing

PathView

Almost all wireless networks work slower than expected and then have periods of getting worse. You can deploy probes (about the size of a book (remember them?)) which sit there all day running performance tests across the wireless network to a key business server. The results show how stable the wireless performance is (or isn't) versus the performance of the wired network.

Summary

There are a number of different ways of looking at wireless network performance, depending on what you are trying to achieve and what problems you are experiencing. Our role at Full Control is to guide you around the options and point you towards the tools that answer your questions.

If you want to combine wired and wireless, there are options but also don't be afraid to buy more than one tool if you want to cover more than one area.