



SMB NETWORKING

A Guide to Planning Your Network



THE IMPORTANCE OF A NETWORK

AN INTEGRAL PART OF YOUR BUSINESS

It's commonplace for a network in an SMB environment to be built around consumer-grade devices. As a result, there's often poor performance, lack of security and overly complicated connections between your devices.

It doesn't need to be this way. A network that has been designed to suit the needs and desired outcomes of a business will be there to provide superior performance, enterprise-grade security and efficient connections between devices.

Cisco provide products to achieve this need, and Millgate offer the expertise to design and build it.

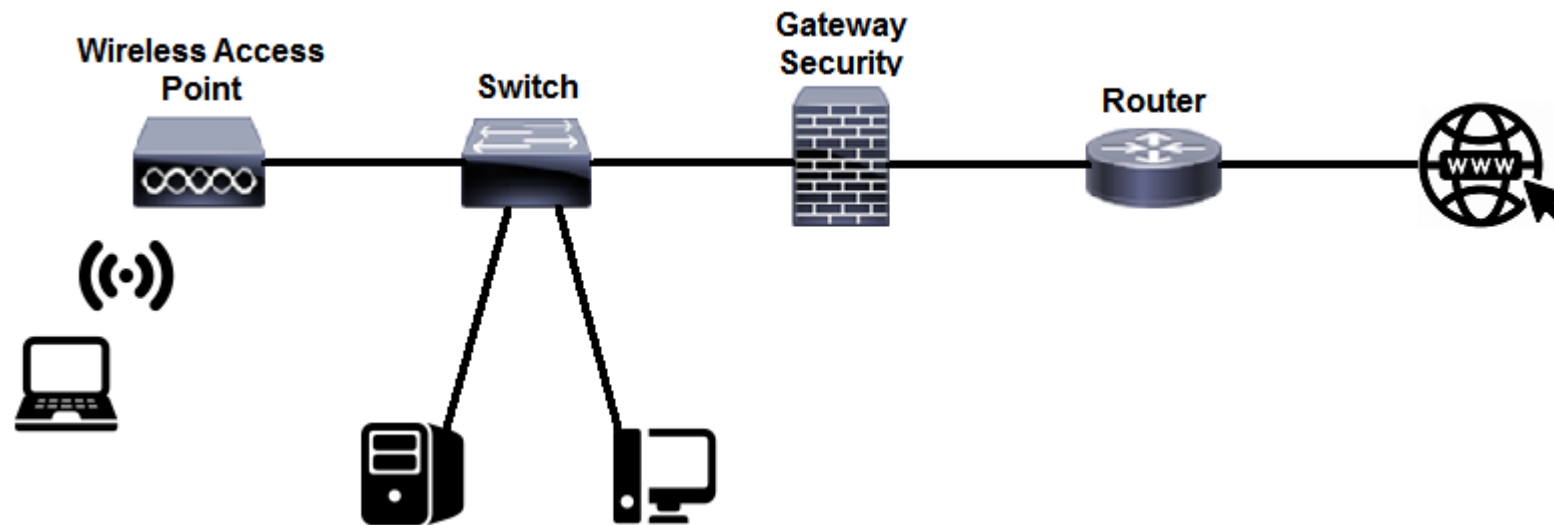
A well-designed network for an SMB can:

- **Improve customer satisfaction** by providing complimentary guest wireless access to a secure internet connection.
- **Increase profitability** by improving the pace of work with a high-speed network.
- **Support business growth** by using a hierarchical network which is modular by design thus easy to expand. Cloud services make it easy to grow your network into additional sites.
- **Security and compliance** with a fortified network that protects your data. The ever-present risk of online attacks is growing daily, making security a necessity.



COMPONENTS OF A NETWORK

TOPOLOGICAL OVERVIEW



WHAT IS THE NETWORK?

The network operates by connecting computers and peripherals using switches, routers, and access points.

These devices perform very different functions, and within the network they communicate with one another, as well as with other networks.

This diagram is a topological representation of the components required in a small or medium sized business.

CISCO UMBRELLA

FOR GATEWAY SECURITY

Cisco Umbrella can provide the first line of defence against threats on the internet. Because Umbrella is delivered from the cloud, it is the easiest way to protect all your users - both on and off the network - in minutes.

Umbrella has a simple but effective methodology – **learn, see, block**. By constantly scanning threats, it can block any attempts to infiltrate the network, whilst constantly learning and improving.

Other great benefits to Cisco Security Umbrella include:

- Industry leading network uptime.
- Visibility into traffic, both on and off the network.
- DNS and IP layer enforcement.

You can try Cisco Umbrella for free with an evaluation from Millgate. Get in touch today to find out how.

DNS & IP LAYER ENFORCEMENT

Umbrella uses DNS to stop threats over all ports and protocols, even direct-to-IP connections. Stop malware before it reaches your endpoints or network.

INTELLIGENT PROXY

Instead of proxying all web traffic, Umbrella routes requests to risky domains for deeper URL and file inspection. You can effectively protect without delay or performance impact.

CALLBACK BLOCKING

Command and control callback blocking is available with Umbrella. Even if devices become infected in other ways, Umbrella prevents connections to attacker's servers. Stop data exfiltration and execution of ransomware encryption.

CISCO SG 350X SERIES

FOR SWITCHES

Having an effective switching product is essential to handling the demands of your network.

Cisco have a range of switches specifically designed for the SMB marketplace, the family is called SG switches and has a switch to suit every requirement. The most popular series in this family is the SG350X, which has been selected for the purposes of this eBook. The series has a flexible range of ten models available which support requirements from 1GE copper, to high-speed 10G fibre ports.



RELIABILITY

Keep your network running so your business never slows down. The 350X series offers stacking capabilities, dual images, and advanced availability protocols.

ADVANCED FEATURES

The 350X series includes capabilities you need to support applications today and in the future. Examples include strong security, advanced QoS, comprehensive IPv6 support, Layer 3 static routing, and true stacking.

PEACE OF MIND

All 350X series switches are protected for the life of the product by the Cisco Limited Lifetime Hardware Warranty, including next-business-day advance replacement, where available.

CISCO MOBILITY EXPRESS

FOR WIRELESS

Providing wireless in your environment is as much an expectation as it is a necessity. Having easy to connect wireless for guests that is safe and secure will add value to your business.

The Cisco solution for this SMB problem is called Mobility Express, which provides central control for a managed wireless network.

There are three series of Access Points supported, each with specifications to support small to medium sized deployments. All the models are 802.11ac Wave 2 certified which gives high speed connections over greater distances than the previous generation. The series' available are Aironet 1815, 1830 and 1850.

Connected Mobile Experiences (CMX) is also available, a tool to work on your Mobility Express network which provides valuable insights through Wi-Fi analytics. CMX is cloud based, so deployment is easy.

The tool will provide information such as:

- What is connected.
- How long they've been connected.
- Repeat visitors.
- Busy time periods.



EASY SETUP

1. Connect the access point to the switch.
2. Start the Cisco Wireless App on smartphone.
3. Set up the wireless network.
4. Done!

SIMPLIFY OPERATIONS

- Easily manage and troubleshoot your WLAN.
- Configure multiple access points simultaneously.
- Built-in guest access.

GROW AS YOU GROW

- Scales up to 100 access points before you need to add a controller.
- Integrates with different access point models

ACHIEVING SUCCESS WITH MILLGATE

FOR NETWORKING

Millgate deliver tech products, services and solutions that actually work. We have over 20 years of success, serving more than 7,500 clients.

Millgate's approach of working in interdependent teams means we provide you with a complete end-to-end technology solution.

We work towards providing tangible, positive outcomes for your business. Put simply, we supply you with a solution that works. No fuss. No empty promises. Just clever tech delivered right.

When it comes to working with you on a project, we use a methodology that follows these six steps:

1. **Understand** – We take the time to get to know you and understand your goals.
2. **Discover** – By talking to you and your stakeholders we get to know your requirements and desired outcomes.
3. **Design** – The in-house technical team is gathered to create a solution that matches or exceeds the needs of your business.
4. **Demonstrate** – Our complete proposal is presented and thoroughly explained. There is an opportunity for a questions and answers session.
5. **Implement** – An engineer or team of engineers are assigned to attend your site and build the recommendation to an agreed timeframe.
6. **Support** – Following delivery our team monitor and assess your solution. The helpdesk is here to support and provide remote assistance.

PROJECT SERVICE

- The service provides you with a detailed proposal showing exactly what you need to purchase to achieve your business outcomes.
- We offer this to clients who are planning a network expansion or network refresh.

PRODUCT RECOMMENDATION SERVICE

- We listen to what you need and then make a recommendation and you will receive a tailored datasheet showing how the product achieves your requirements.
- We offer this to clients who are looking at replacing an aging or broken device.

GENERAL ADVICE SERVICE

We offer:

- Product information.
- Overviews of the marketplace.
- Technology updates.
- Manufacturer information as an authorised partner.

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