



What is
MANAGED WIFI
and why does your
business need it?

Modernizing Business Landscape With A Next-Gen Managed Wi-Fi Solution

Over the past few decades, Wi-Fi has significantly changed the way businesses operate. Since the introduction of wireless LAN, IEEE 802.11, in 1997, the business landscape has transformed, enabling companies to become tech-driven in this cloud-first era. With access to fast internet, workforces can quickly transfer the heaviest files, enjoy lag-free conversations, and connect their distributed business sites over a Wi-Fi network.

“Anytime, anywhere internet” has given rise to the **Bring Your Device (BYOD)** culture allowing more flexibility at workplaces. With a robust Wi-Fi network, employees can bring their own smart devices like phones, tablets, or laptops to work how they want. According to a survey, 69% of companies said they were happy with the increased productivity, collaboration, and adherence to timelines that their BYOD policy facilitated. Incidentally, in most BYOD devices, Wi-Fi is the primary medium to connect to the internet.

Thus, combining an efficient Wi-Fi network and BYOD culture minimizes wasted time and helps businesses boost productivity. Research suggests that fully connected employees are more comfortable with their devices and thus (where is this data point coming from?) .

For brick and mortar businesses, an enterprise-grade Wi-Fi infrastructure solution can help meet the digital demands of retail business, boost customer satisfaction and improve sales by getting more walk-ins and building a better brand image.





Managed Wi-Fi: A comprehensive solution

What is Managed Wi-Fi?

Managed Wi-Fi is a next-gen Wi-Fi solution that combines the capabilities of a high-speed Wi-Fi network and end-to-end network management. Managed service providers deploy a customized Wi-Fi solution as per customer requirements through a team of experts specializing in WLAN services for continuous network monitoring and control. As a result, businesses maintain uninterrupted uptime, and their network stays updated, compliant, and secure.

The Managed Wi-Fi provider offers different network identifiers (SSIDS) for employees, customers, and guests and ensures secured internet access across all segments of users. With role-based access and network analytics available to enterprise customers, Managed Wi-Fi streamlines network usage control across the business.

Managed Wi-Fi is offered as a cloud-based subscription service. The managed services provider offers all services remotely, which can be scaled anytime and tailored to the customer's needs. With centralized platforms, network management and monitoring are far easier with Managed Wi-Fi.

Business challenges with legacy networks and how Managed Wi-Fi tackles them

Dependency on the internal IT team for managing and troubleshooting:

The internal teams are not specialized in managing and troubleshooting Wi-Fi networks. Managed Wi-Fi takes the burden of troubleshooting off them while they tend to critical business tasks.

High CapEx and OpEx:

Onsite Wi-Fi installation requires high capital expenditure, and the company must also spend on maintenance, upkeep, and equipment upgrades. A Managed Wi-Fi provider optimally uses the infrastructure to offer better services to the same set of users over a longer period of time.

Business discontinuity due to outages:

Large corporations' traditional Wi-Fi networks have failed, causing significant losses in terms of time and revenue. Organizations that depend heavily on phones, the internet, and data must take adequate steps to ensure business continuity. Managed Wi-Fi helps combat challenges with alerts that help avoid issues before they occur and a team of specialists that tends to even minor issues that may become critical later. They also devise a backup plan to lean on in case of an unavoidable outage.

Complex network management:

Wireless networks have complex structures comprising hundreds of access points, firewalls, switches, and other components. This gets even more complex when Wi-Fi coverage is distributed across multiple branches of the organization. It is very time-consuming and cost-ineffective to address each of the components individually. Managed Wi-Fi allows you to manage your network spread across multiple sites from a centralized, single console.

Compromised network security:

Employees and guests at business premises, along with remote workers and clients who use VPNs to connect to business Wi-Fi, share confidential information such as payroll data, login information, etc. They also make sensitive transactions like credit card payments and travel bookings. This information is critical for all businesses, and compromised network security as a result of inadequate network design can lead to the leakage or theft of such data.

Inability to scale Wi-Fi:

When you expand your business to new locations, setting up a new Wi-Fi solution at the new business site becomes a massive challenge. Designing, installing, deploying, and managing a new Wi-Fi setup becomes too taxing and raises installation costs, network management, and maintenance costs. Managed Wi-Fi helps you overcome these obstacles by allowing you to scale the same network solution to multiple branches. This way, you can ensure business scalability by keeping the expenses at the lowest.

Cumbersome network management:

With multi-cloud platforms, multiple vendors, multiple business units, and a distributed business, it can get too demanding for the in-house teams to manage the Wi-Fi network. Moreover, they don't have the required skill set to prevent network issues that might surface unexpectedly. This problem is entirely eliminated with Managed Wi-Fi, as you get a team of network experts who can scale, manage, monitor, and secure your business network.

Hardware maintenance and updates:

A Wi-Fi network requires a significant amount of hardware based on capacity. It requires regular maintenance and updates to keep up with wear and tear and rapid technological advancements. Failure to do so may lead to network failures and outages. Managed Wi-Fi providers employ networking tools to keep your network hardware and software up to date.

Under the umbrella of Managed Wi-Fi solution:

There is often confusion regarding the various solution components of Managed Wi-Fi. Below mentioned are all the essentials a Managed Wi-Fi provider is responsible for:

Application platform:



Business owners or managers can manage the network using a centralized platform. This tool enables real-time visibility, reporting of network performance, and analytics that help to optimize network usage.



Managed Wi-Fi providers offer captive portals to manage access for multiple users within the departments and organization.

Infrastructure:



Managed Wi-Fi providers help to set up access points, firewalls, internet bandwidth, and other equipment required to establish the entire network infrastructure.

Services:

The portfolio of managed services includes:



Firmware and software upgrades



Outage prevention



Hardware repairs and replacement



Reporting and analysis



24*7 monitoring



Troubleshooting



Designing a bespoke Managed Wi-Fi solution:



Predictive RF Design:

Modern software tools can help to assess Wi-Fi access points and predict coverage accurately. The software generates an RF design along with predictive coverage for the installation. While it sounds easy, it requires extensive experience. This step paves the way for all the other actions in WLAN design and is thus critical. While there may be plenty of free RF planning software, they are mostly inaccurate. The amount of development and updating required to generate RF designs makes RF planning software expensive. Many organizations fall for the marketing tactics of free RF planning software available in the market. These software tools often overestimate the number of access points required. Managed Wi-Fi service providers use the best and most accurate software and also allocate experienced personnel to use them.



Site Surveys:

While predictive RF design is the starting point of the process, the accurate site may have aspects that have not been entered into the software yet. Site surveys help to validate the predictive design and make the necessary adjustments. On-site RF site surveys are required in most environments with many moving parts. Medical facilities are the most complex, followed by warehouses and manufacturing units.



WLAN Engineering:

The RF planning stage results in a list of equipment, antenna, and mounts required to build the Wi-Fi network. It will also provide details of the initial steps necessary for system implementation. The execution of the plan will happen in the deployment phase, including installation & configuration, integration, and system testing.



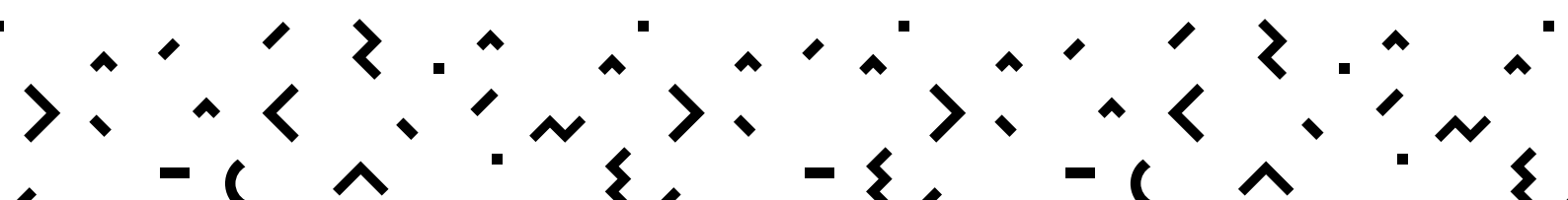
Performance assessment:

Once the plan in the RF design phase is implemented in the deployment phase, it is time to test its efficiency and whether the infrastructure has been successfully deployed. This stage also requires expensive software tools and expertise to use them. These tools will assess coverage, capacity, and application performance.



Coverage and capacity testing:

WLAN management software checks real-time coverage in a live environment. They assess access point coverage and measure capacity by analyzing the users connected to it. This will help the team to determine the changes needed in the live environment.





Application performance testing:

After coverage & capacity testing, the next step is to assess user experience. This test is the most critical. It requires a set of tools that assess the network based on the performance of different applications like video streaming, emailing, business-specific applications, etc. These tests happen on multiple devices and compare system performance against industry standards for a specific application.



Performance monitoring and system management:

Passing all the above steps may seem like the process's end, but it is not. Changes in devices and physical environments, technological advancements in the field, and software updates required to combat security threats make it imperative to monitor the system regularly. Monitoring is essential to prevent the system from getting obsolete by updating software regularly, addressing security issues, and making continual changes.

Managed WiFi providers take care of all these steps required for setting up, managing, upgrading, and maintaining WiFi networks.



Features of Managed Wi-Fi

Centralized user management portal:

Managed Wi-Fi comes with a centralized portal that allows business leaders to manage users, and their access and activity.

Built-in visitor management:

It may become cumbersome or impossible to manage individual access to the system when the company has numerous users. Managed Wi-Fi service providers offer an authentication platform with built-in visitor management and role-based access that helps to categorize users based on who, what, where, when, and how they are trying to access the network.

Constant performance monitoring:

User expectations have been increasing rapidly, and most of them now want high-performing networks. Consistently monitoring performance helps offer a superior experience by avoiding potential problems. It also helps to view end users' network usage and assess the application type, networking components, etc.

Application prioritization:

Managed Wi-Fi enables organizations to set mission-critical applications to perform well even when many devices and applications are using the network. This helps to strike a balance between business and recreational applications, and maintain performance for business-critical tasks.

High-capacity load balancing:

It is easy to prioritize coverage over capacity. However, capacity planning and management are indispensable with the unprecedented rise in devices such as smartphones, tablets, and laptops. High-capacity load balancing helps handle the high demand for wireless and wired infrastructure. Thus, the system will find access points that are not overloaded and help users connect to those based on available capacity. Managed Wi-Fi control management system also balances the user load by shifting users between different Wi-Fi bands.

Integration with existing PMS:

Businesses such as hotels and hospitals with a vast user base can integrate their Property Management System (PMS) with the Managed Wi-Fi, allowing regular guests to connect to the network as soon as they enter the premises.

Enhanced Wi-Fi security:

Managed WiFi providers offer built-in security features like end-to-end encryption, threat intelligence, & authentication on both network & user-level. It also provides Firewall as a Service (FWaaS), a cloud-based firewall solution for safeguarding the business network. This is critical to ensure the network remains safe from malware.

Business benefits and possibilities that Managed Wi-Fi unlocks



Cost-effective solution:

Businesses only need to pay subscription costs for accessing Managed Wi-Fi services as opposed to the tremendous capital and operating costs investment needed in a traditional Wi-Fi solution.



Low TCO:

With Managed Wi-Fi, the costs of purchasing, deploying, and using a Wi-Fi infrastructure are offered on a subscription model with minimal upfront investment. Thus, organizations have a significantly lower cost of ownership with a better network experience.



Increased business productivity:

Managed Wi-Fi is designed to increase productivity. When connectivity is uninterrupted, and the teams can focus solely on business tasks, they perform better.



Scalability:

Managed Wi-Fi makes it possible to start small and increase capacity and coverage as the business needs grow.

This eliminates the need to redo the entire network or build one from scratch.



Increased reliability:

The possibility of an outage is significantly lower with Managed Wi-Fi because of the available round-the-clock qualified personnel and the particular focus on preventive maintenance. It is also easier to troubleshoot issues with round-the-clock network support from Managed Wi-Fi providers.



High-speed connectivity:

With Managed Wi-Fi, businesses can access higher bandwidths and speeds based on their business needs. They can also upgrade the infrastructure quickly based on their growing needs.



Simplified network management:

Businesses opting for Managed Wi-Fi no longer need to worry about managing the network. They can focus on other organizational tasks with an end-to-end managed network solution.



In-depth monitoring and reporting:

Since Managed Wi-Fi is offered as-a-service, the provider is accountable for its performance and the company's satisfaction as a customer. They consistently monitor the network and its performance and provide reports and analytics.



Simplified upgrades:

As the technological landscape evolves, it becomes necessary to upgrade hardware, firmware, and software. It takes significant time and effort to make these upgrades in a traditional Wi-Fi setup. However, Managed Wi-Fi providers do this on an ongoing basis for their customers' networks to keep pace with technological developments.



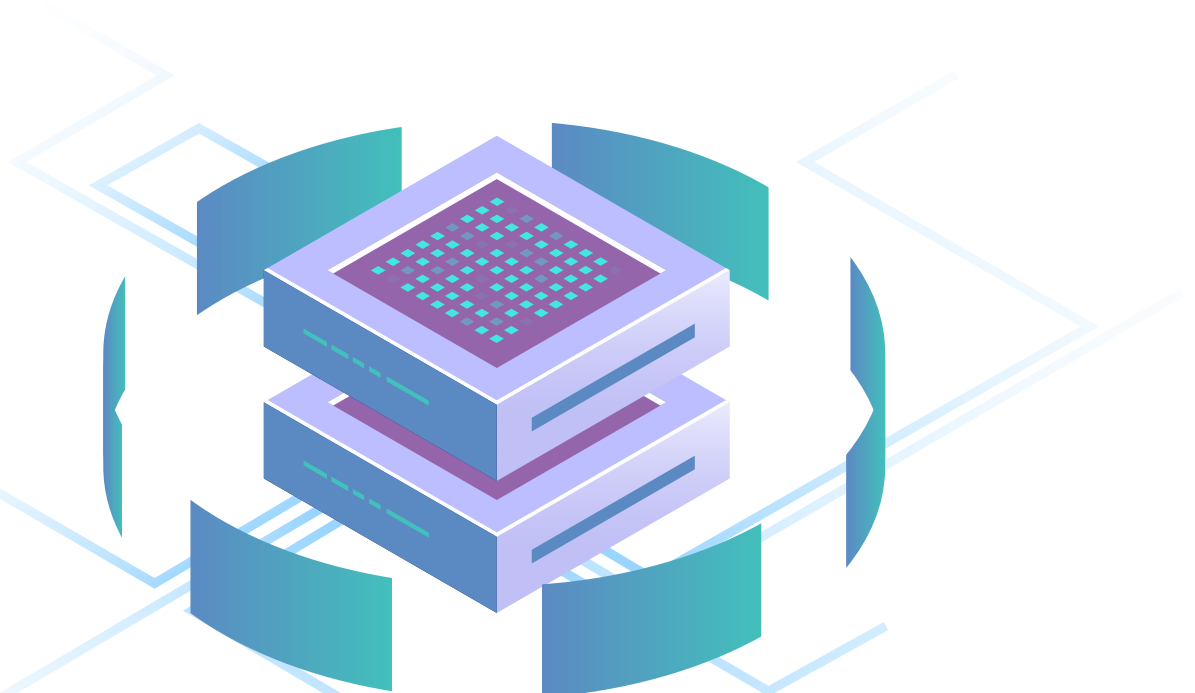
Seamless user experience:

With Managed Wi-Fi, all users within the organization can benefit from high speeds, robust network performance, and uninterrupted access to their preferred applications.



24*7 network monitoring and support:

An organization's network must be available and accessible always, and thus it is important to have uninterrupted connectivity at all times. Managed Wi-Fi comes with 24*7 support and query resolution by networking specialists to nip any networking issues and threats in the bud.



How Managed wi-fi paves the way for digital transformation



As the world rapidly moves toward better digital connectivity aided by access technologies like state-of-the-art Wi-Fi, Managed Wi-Fi can help achieve business goals quickly. It will ensure that there is no packet loss while performing IT operations and thus increase reliability. Robust network connectivity is the best way to streamline processes and facilitate guaranteed fulfillment of enterprise-grade SLAs. As organizations scale to open new branches, they can extend their Managed Wi-Fi solution to the new sites.

The Spectra advantage

Spectra helps to resolve apprehensions of business owners in adopting Managed Wi-Fi. Many business owners are apprehensive about controlling their Wi-Fi network ultimately. Spectra makes it possible to adopt a modular approach and hand over some segments of Wi-Fi and retain others. Businesses that need **100%** uptime can benefit immensely from this capability.

Apart from this, Spectra offers the following advantages:



End-to-end network solutions



Dedicated team for round-the-clock support



Fast, secure, and seamless internet connectivity



Easy access to network usage insights and analytics



Adaptability for all types of businesses



Easy to manage operations using a single console



Simplified network operations



Low operating expenses and simplified network management

As an organization adds users, devices, and applications, it becomes more dependent on its wireless network. Fragile network infrastructure can get overburdened and make way for low performance, security breaches, or network outages. Trusting the services of a Managed Wi-Fi provider is an organization's best bet to drive digital transformation with a robust, reliable, secure, and modernized network solution.

SPECTRA

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