NODE4

Empowering business to do more

SD-WAN 101:
The Beginner's Guide to SD-WAN

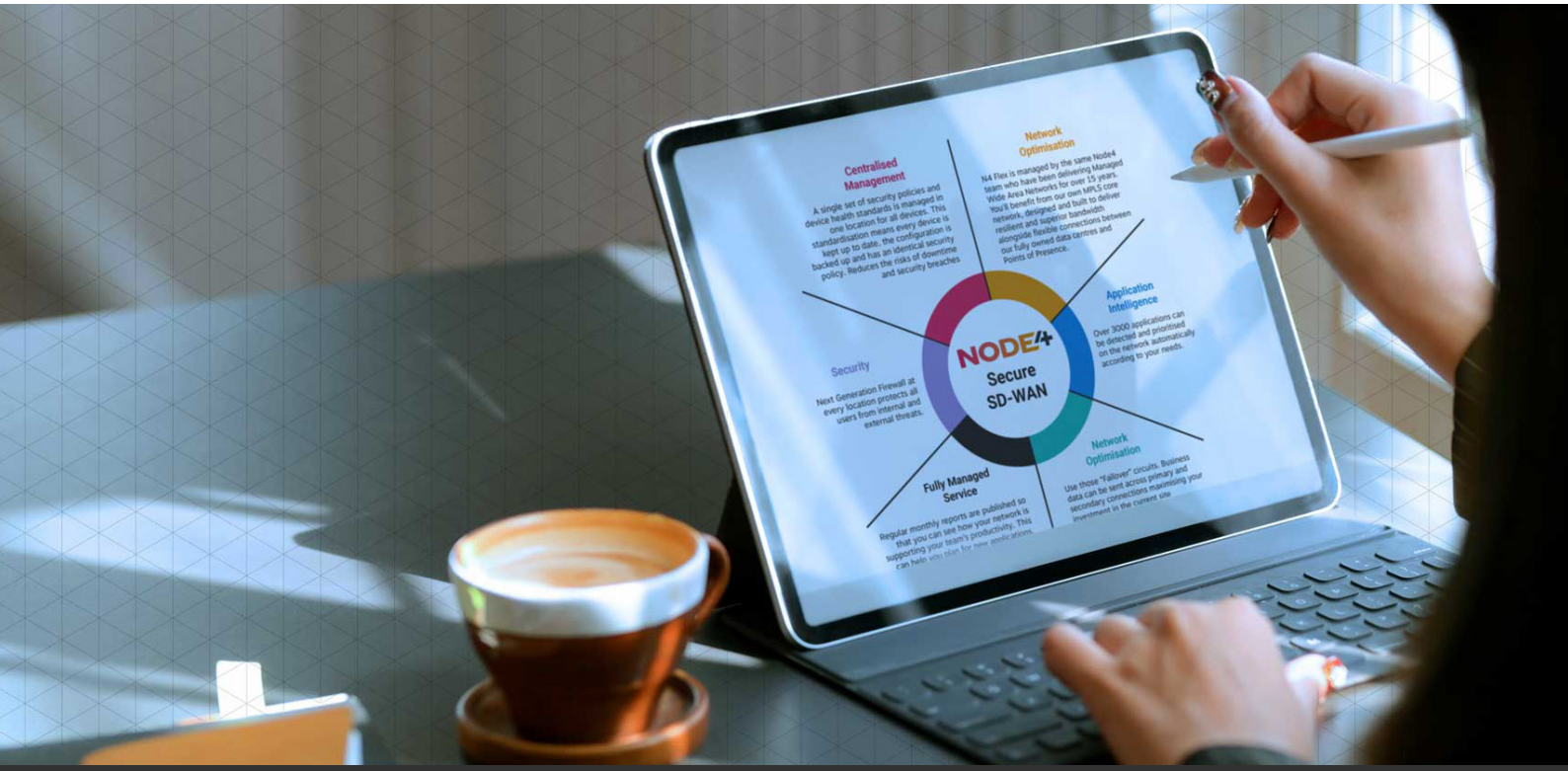
WPSDW20

The Beginner's Guide to SD-WAN

Is SD-WAN the way forward for your networking and digital transformation journey? Or is it another technology to add to the long list of buzz words, which promises more than it can actually deliver when applied to your business?

Before you can answer these questions, you need to do your research, which for many of us means starting with the basics, understanding what SD-WAN is and what it offers. This guide breaks down everything you need to know about SD-WAN before you start asking more nuanced questions about how it would work within your business....

1. What is SD-WAN?
2. What are the benefits?
3. Is SD-WAN secure?
4. Is SD-WAN a replacement for MPLS?
5. What are the differences between traditional WAN, SD-WAN and Secure SD-WAN?



Further resources
Download our infographic: *Node4 Secure SD-WAN*

Download Infographic

1. What is SD-WAN?

SD-WAN is a software-defined approach to managing wide area networks. You use software on centralised consoles to control network connections, application flows, policies, security mechanisms and general administration.

2. What are the benefits?

There are various benefits, which can be broadly broken down into:

Improved performance

SD-WAN detects applications and prioritises traffic flow automatically, according to your needs, so that everybody has a better experience, whether they're on an HD video call with the team or simply accessing files across your network. You can send business data across primary and secondary connections, and in the event of line failure, 'application intelligence' will ensure that key applications have priority on the remaining line.

More visibility and control

Centralised management allows you to manage a single set of security policies and device health standards in one location for all devices. This standardisation means every device is kept up to date, the configuration is backed up and has an identical security policy.

On your centralised console, you'll have analytics and reporting features which allow you to see how your network is supporting business productivity. This can help you to plan for new applications, technology deployments, and right-sizing the connectivity for your next location.

Easy to set up

As SD-WAN works with 4G and 5G connectivity, you can get it set up in your new location straight away, while the fixed line connectivity is being installed. Also, many technology providers offer Zero Touch Provisioning for SD-WAN, which speeds up new site deployments and replacements. Your provider arranges for the network appliances to be shipped directly from the vendor to you, and once connected, pushes out configurations remotely.

Further resources
Watch our webinar: *Should Your WAN Be Defined by Software?*

3. Is SD-WAN secure?

It depends on the SD-WAN solution you choose.

SD-WAN seems inherently less secure because you're moving traffic off your structured, private MPLS on to direct internet, where it will be more exposed to malware and hackers. Many SD-WAN solutions on the market just don't have the comprehensive security features to reduce these risks.

There are however 'Secure SD-WAN' solutions out there, which are designed with comprehensive security and data protection in mind. Node4's Secure SD-WAN solution, for example, has crucial security features including:

- **Fortigate Next Generation Firewalls** at every location, which protects all users from internal and external threats. You can also control access to websites using a built-in web-filtering solution.
- **Intrusion Prevention and Anti-Malware** at every location to actively stop the spread of malicious code throughout your organisation.
- **FortiAnalyzer Network Analytics and Reporting**, which provides an overview of your secure network, as well as tools to analyse, discover and mitigate threats.
- **Centralised Management**, which allows a single set of security policies and device health standards to be managed in one location for all devices.
- **Bring Your Own Network** functionality, which means you can bring unmanaged network locations, such as co-working spaces and home offices, under the same security and application policies as your standard locations. In addition, traffic from these locations is encrypted for maximum security.

4. Is SD-WAN a replacement for MPLS?

No – we think that rather than a replacement, it should be treated as a supplement to give you more control over your applications and security. An effective SD-WAN solution uses MPLS as the secure building blocks for getting every site connected together. SD-WAN appliances are then deployed at each location to enhance application and security control.

Further resources
Read our blog: *SD-WAN 101*

Read the blog

5. What are the differences between traditional WAN, SD-WAN and Secure SD-WAN?

When you're weighing up Secure SD-WAN against traditional WAN, there are at least three issues you should consider: security, flexibility and management.

Security

Traditional WAN is built to trust internal communication flow, which means malware can easily spread between locations.

With SD-WAN, you move your traffic on to direct internet, so your traffic flow becomes more exposed to external threats.

Secure SD-WAN has additional security features such as a Next Generation Firewall and UTM appliances at every location – which means you get the best of both worlds, protection from internal and external threats.

Flexibility

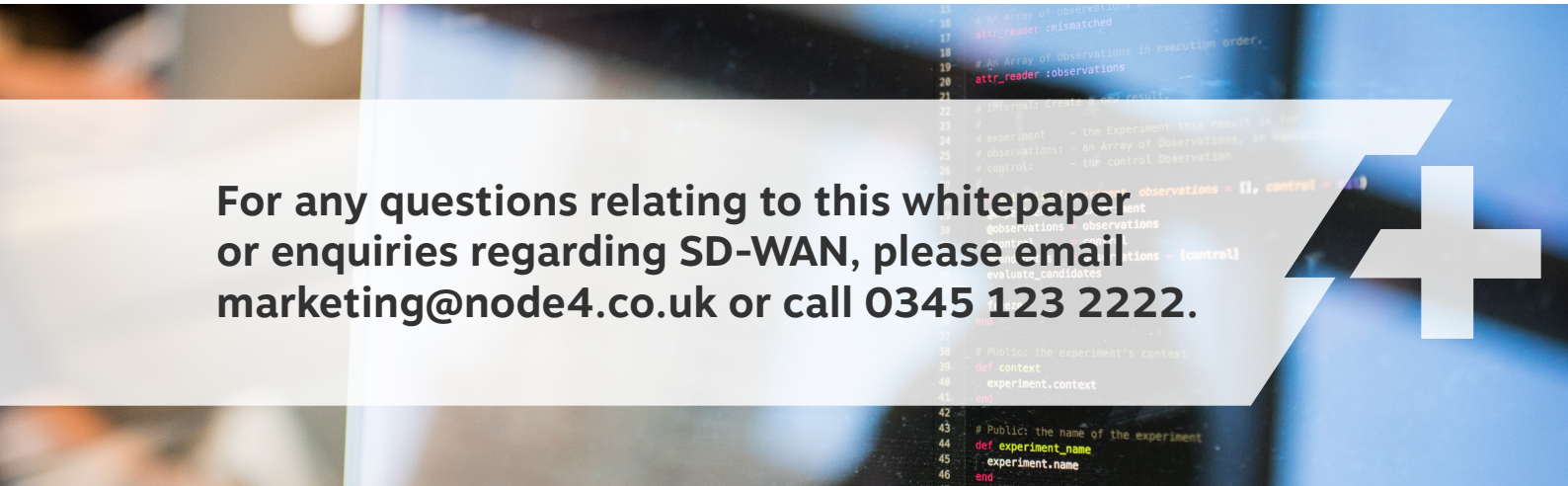
Traditional WAN classifies all internet traffic with the same importance and can't prioritise one SaaS app over another.

SD-WAN and Secure SD-WAN, on the other hand, detect and prioritise applications and will adapt to your changing business needs. They include blended MPLS and Direct Internet connections at the branch for intelligent routing.

Management

Traditional WAN is deployed once on a per device basis, with limited centralised management for configuration, policy or device compliance.

SD-WAN and Secure SD-WAN can be managed centrally, so you have a central console for managing policy, compliance and security updates.



For any questions relating to this whitepaper or enquiries regarding SD-WAN, please email marketing@node4.co.uk or call 0345 123 2222.

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