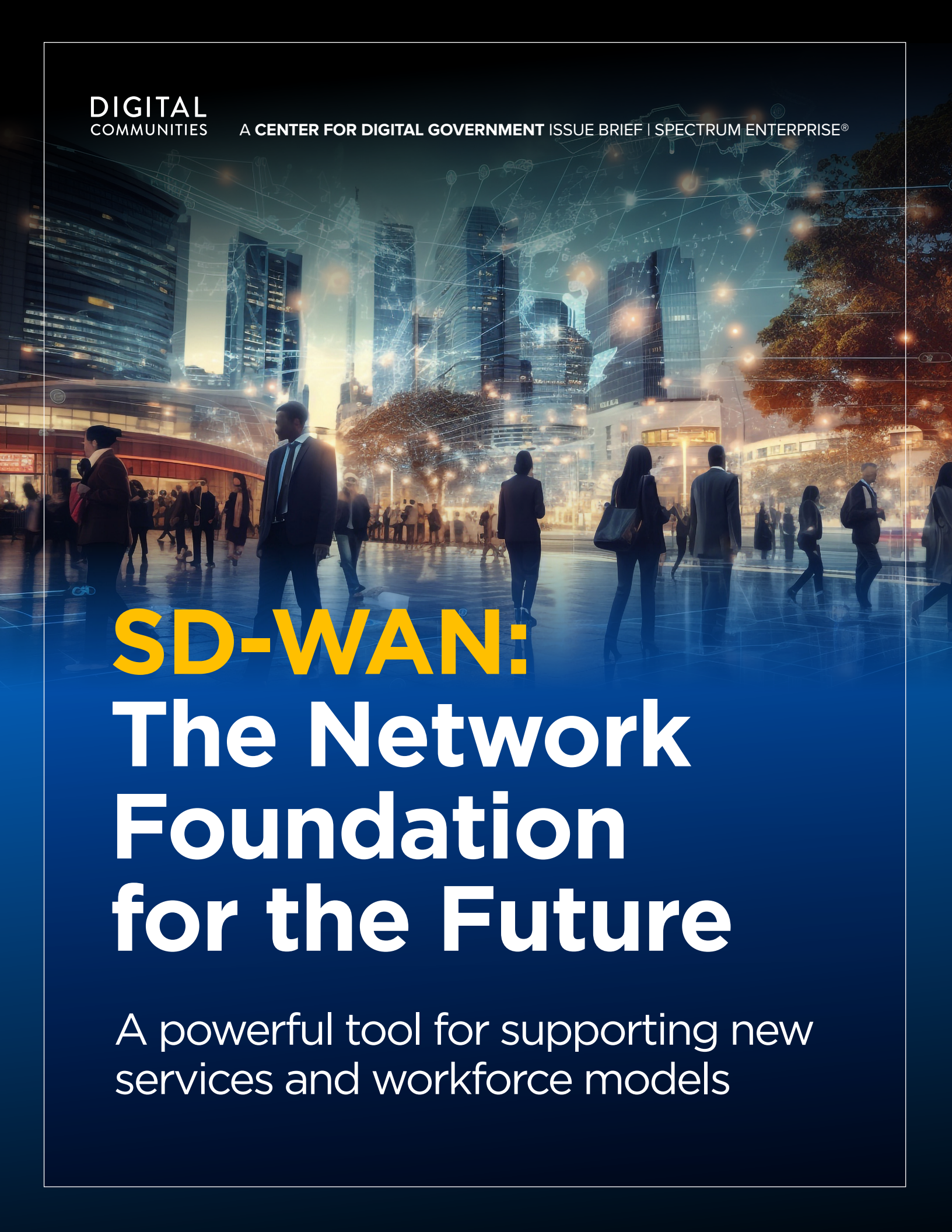


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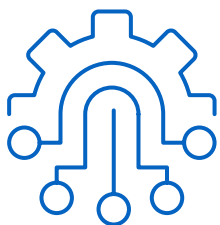


# SD-WAN: The Network Foundation for the Future

A powerful tool for supporting new  
services and workforce models

## Introduction

Software-defined wide area network (SD-WAN) technology gives government agencies a powerful tool to improve the user experience and boost efficiency. SD-WAN strengthens connectivity and enables precise control of network resources, which allows government workforces and residents to communicate and collaborate more effectively. The cloud-based technology also lays a foundation for next-generation digital services and internal workflow modernization.



SD-WAN improves connectivity and simplifies network management by creating secure direct connections instead of routing traffic through a data center.

## The SD-WAN Revolution

SD-WAN uses cloud technology to connect local networks instead of routing traffic through a central network hub or data center. The technology simplifies network management and supports modern cloud-based applications by creating secure direct connections to multiple locations.

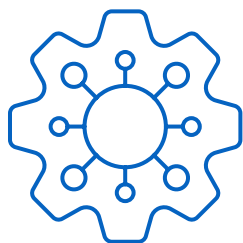
SD-WAN adoption has accelerated since the pandemic, when government agencies expanded hybrid work and adopted more cloud-based applications. More than 80% of state governments have implemented SD-WAN technology, and 50% are upgrading these networks, according to the Center for Digital Government's (CDG) 2022 Digital States Survey. About 45% of cities have deployed SD-WAN, and 20% are upgrading, according to CDG's 2022 Digital Cities Survey. Another 37% are implementing the technology for the first time.

For agencies connecting multiple offices to each other and to cloud-based applications, SD-WAN reduces network costs and improves service for employees, whether they are in the office or working remotely. Compared to traditional hardwired WANs, SD-WAN technology is more scalable and flexible. It provides greater visibility into network activity and gives IT teams the ability to prioritize mission-critical network traffic.

SD-WAN offers agencies a cost-effective way to modernize aging networks and reduce the amount of in-house hardware they must manage and eventually replace. The technology also enables agencies to consolidate existing maintenance contracts.



Most agencies acquire SD-WAN as a managed service from a vendor. But agencies may share network operating responsibilities with their service provider through a co-management arrangement.



## Selecting a Solution

IT leaders must understand their current network infrastructure and the needs of internal and external users to design, operate and manage an SD-WAN effectively. SD-WAN technology was initially marketed as a hands-off, set-and-forget networking solution. In reality, the technology requires IT teams to make decisions about network architecture and management. “It’s an easier button, not an easy button,” one technology expert says.

Most organizations deploy SD-WAN through a managed services agreement with a technology provider. An SD-WAN can be built and managed in house, but that requires agencies to design the network architecture, select and install the networking hardware, manage software licensing, troubleshoot problems, and replace equipment as it reaches end of life. Because of these factors — and the public sector’s continuing struggle to hire and retain IT talent — managed services represent a more practical and cost-effective option for most agencies.

Agencies must still determine the parameters of these managed services, many of which include co-management options in which government IT teams and the vendor share responsibility for operating the network. Agencies routinely opt to manage user and traffic policies or bandwidth allocations for different applications, while leaving other aspects of network operation and maintenance to their technology partner.

Before entering a co-managed model, you need to accurately evaluate your organization’s internal IT capabilities. “It all comes down to what level of knowledge your staff has and is comfortable doing,” one networking expert says. “The more you get into changing network configurations and policies, the more you want to know you’re comfortable with your team.”

Given the role that vendors play in deploying and managing an SD-WAN, you need to evaluate prospective partners carefully. Look for these qualities:

- \* Extensive government experience
- \* Multiple software and hardware options as part of an SD-WAN deployment
- \* Networks designed with security and compliance in mind
- \* Service models that emphasize accountability, support and scalability

Once you choose a vendor, work closely with them. Your technology partner needs detailed information about current and future use cases to design a network infrastructure that meets your needs. Collaborate with your partner to document and develop maps for new SD-WAN infrastructure and determine appropriate security policies. Also identify and train internal staff to take on your share of responsibilities in co-managed models.

## Moving Beyond Limitations

SD-WAN technology represents an opportunity for governments to move beyond the limitations of existing network infrastructure. It lets agencies embrace new digital services, implement modern cloud-based applications and leverage emerging technologies such as artificial intelligence. Above all, SD-WAN makes it easier to improve the user experience for employees and the public, helping agencies respond to changing needs in their communities.

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