FORTINET

SECURE ACCESS SOLUTION

Balancing Flexible Network Access with Enterprise-Class Security

SOLUTION GUIDE

INTRODUCTION

Technology and market trends are rapidly changing the way enterprises design local area networks, onboard clients, and enable business applications of every type, and this has implications for how network access security is planned, deployed, and managed. As a result, IT administrators are starting to recognize network access and network security can no longer be viewed independently and in fact are now dependent on each other.

GROWTH IN UNSECURE CONNECTED DEVICES

The number and types of network-connected wireless devices continues to grow unabated. BYOD (Bring Your Own Device) has become the norm, and enterprise networks have moved beyond connecting laptops, smartphones, and tablets. Now, the emerging IoT (Internet of Things) technology is bringing new device types to the enterprise in virtually every industry.

However, this exponential increase in unsecured connected devices presents new vulnerabilities and a growing attack surface for hackers to exploit. On top of the challenges of BYOD onboarding, IoT devices such as wireless sensor nodes, location-based beacons, and other small devices pose an additional threat, since many cannot support a suite of security solutions. This puts the onus on the network to keep these devices secure.

WIRELESS SECURITY IS A TOP CIO CONCERN

The shifting device landscape from corporate-owned to employee-owned, and users' growing reliance on the Internet, also puts device and application layer security in the limelight. Recent surveys indicate almost 50% of IT decision-makers rate wireless LANs among the two most vulnerable areas of their IT infrastructure.

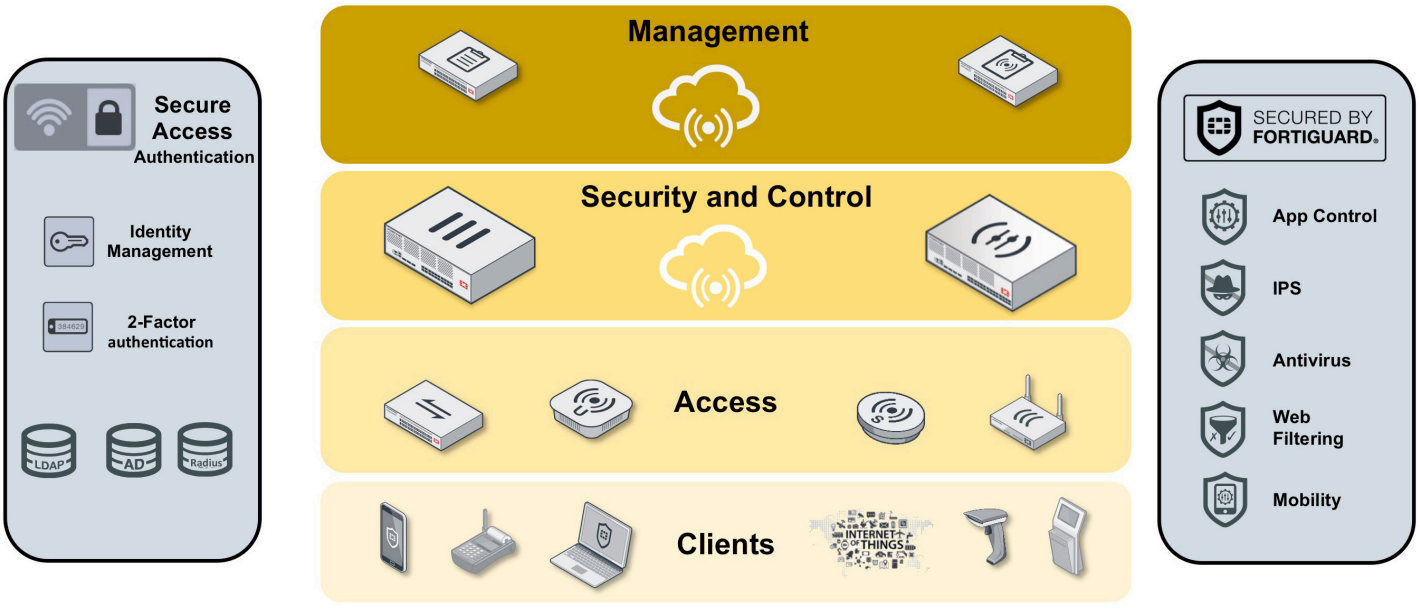
Device and application proliferation go hand in hand. With mobile application use growing at 76% year on year, enterprises face not only support challenges from more enterprise applications, but also new vulnerabilities that stem from applications and devices never before seen on the network.

GROWING OPERATIONAL COMPLEXITY FOR IT

On top of this unprecedented growth, users expect a more unified access experience—one that ensures consistent application and device policies across both wired and wireless environments, and across multiple devices per user.

The growing sophistication of cyberattacks is exposing the vulnerabilities in traditional flat networks. The new strategy needed to protect against sophisticated attacks is to add multiple layers of defense, including explicit internal segmentation, to break or mitigate the chain of infection.

All these changes in usage, devices, and applications create an enormous challenge for IT organizations to protect the network from the ever-evolving array of threat vectors.



Secure Access

The requirements for security and access have evolved from what was once a compromise to today's requirement of providing the highest level of both solutions.

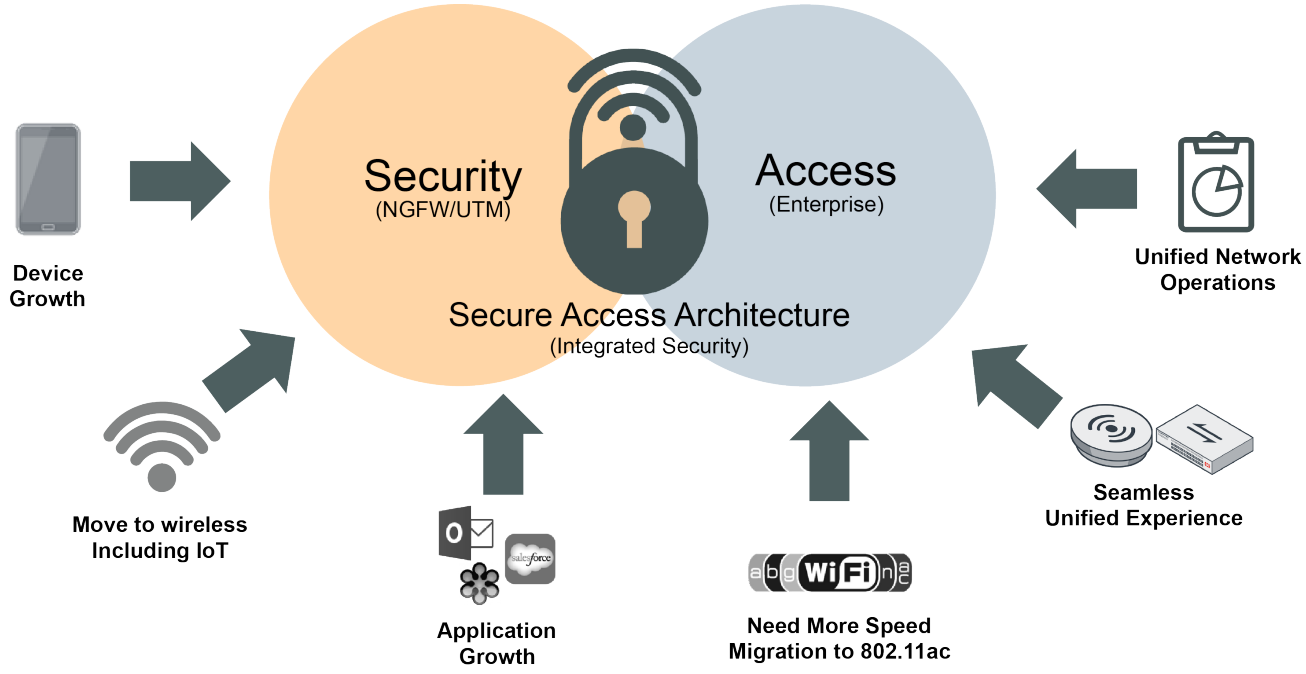


FIGURE 1: FIGURE DESCRIPTION

FORTINET SECURE ACCESS SOLUTION

Securing business communications, personal information, financial Transactions, and mobile devices involves much more than network access control. It requires scanning for malware, preventing access to malicious websites, end-point integrity checking, controlling application usage, and much more.

But typical Wi-Fi solutions do not cater to these requirements. They only address connectivity and access security. Security above Layer 2 is typically provided as an overlay by a variety of security appliances, or as a cut-down security feature inside the product, which often conflicts with any existing UTM or firewall on-site. Fortinet's network access solutions are different. They include comprehensive world-class network security at their core.

Fortinet's Secure Access Solution ensures the same award-winning security that is validated by independent certification agencies (NSS Labs, etc.) is available to every type of Wi-Fi deployment, from a stand-alone AP in an isolated office, to a handful of APs in a retail store, to thousands of APs deployed across a large campus or even a distributed enterprise.

To meet the diverse requirements of different use cases from large to small, on-premise versus cloud-based management, and organizational differences, different WLAN solutions and topologies have emerged. While other WLAN vendors focus on a single architecture and present identical solutions as the answer for every problem, Fortinet enables enterprises of any size, in any industry, to choose the topology and network management that's best suited for their network, organizational structure, or management requirements without ever having to compromise on security protection.

FORTINET SECURE ACCESS OFFERINGS

Only Fortinet delivers three offerings designed to address different WLAN requirements: An integrated solution in which switching, WLAN control, and security services are integrated in a single, high-performance appliance; a more traditional WLAN controller solution designed to support high-density and high-mobility environments with security services unmatched in the industry; and finally a cloud-managed wireless solution providing the simplest deployment option, yet still maintaining the highest level of security.

To provide the level of security equivalent to Fortinet, other vendors need a variety of different supplementary security products, which add to the operational complexity and TCO (Total Cost of Ownership) of their solutions. In contrast, Fortinet's secure access portfolio offers the same comprehensive security across all three access platforms, whether on-premise or cloud-managed. This enables businesses to mix and match deployment models for different use cases, without giving up critical security protection.

INTEGRATED WIRELESS OFFERING—UNIFIED MANAGEMENT, SUPERIOR VISIBILITY, AND CONTROL

Fortinet's Integrated Secure Access offering is a family of access points and switches that are managed via an on-premise or remote FortiGate. Fortinet's integrated solution is built upon products recognized in Gartner Group's Magic Quadrants for Wired/Wireless LAN Access, Unified Threat Management, and Enterprise Firewalls. In this way, the FortiGate consolidates the

functions of Network Firewall, IPS, Anti-malware, VPN, WAN Optimization, Web Filtering, and Application Control together with WLAN and switch control in a single platform. For branch office deployments, FortiGate is also available with an integrated AP known as FortiWiFi.

With security, connectivity, and access control, unified through a "single pane of glass," enterprises can centrally administer consistent user, device, and application policies across wired and wireless with ease. FortiGate provides unprecedented visibility and control of applications, and enables effortless BYOD onboarding.

Complete PCI-DSS and HIPAA compliance is assured, along with the industry's most comprehensive protection for all manner of wireless and Internet threats. And like other Fortinet security products, FortiGate is Secured by FortiGuard Labs, an internal security intelligence and research agency, which delivers regular signature updates, ensuring immediate protection from emerging cyberthreats.

The combination of FortiGate security and FortiAPs gives enterprises of all sizes, in various industries, the scalability to deploy thousands of APs. It also enables secure access for tens of thousands of clients, without the complexity of additional point security products, in order to provide comprehensive, world-class threat protection.

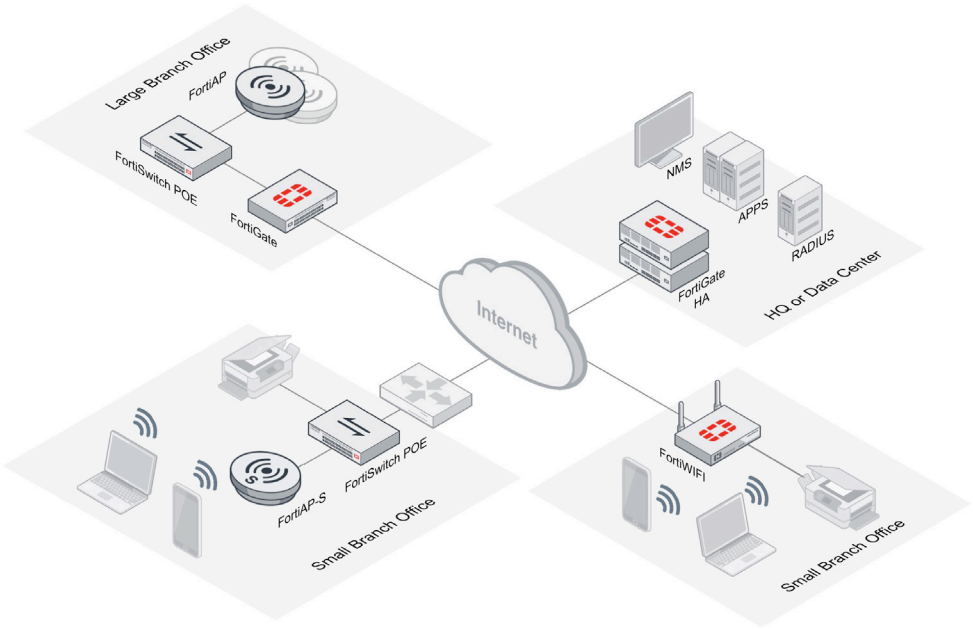


FIGURE 2: FORTINET INTEGRATED WIRELESS OFFERING

KEY BENEFITS

- Unified management of wired, wireless, and security
- Intuitive "single-pane-of-glass" management interface
- Superior 802.11ac performance
- Comprehensive threat protection provided by a single appliance
- S-Series access points with a next-generation firewall built in
- One-box, all-inclusive solution for remote office network
- Unmatched visibility and control of applications and utilization
- Security kept up to date through regular signature updates from FortiGate Labs

WLAN CONTROLLER OFFERING—EASY DEPLOYMENT AND SCALING, UNIQUE QoE FEATURES

Fortinet's Secure Access WLAN Controller offering consists of best-of-breed components for switching, WLAN, and cybersecurity. This is the ideal solution when it makes sense for an organization to separate the management of network access infrastructure from the network security infrastructure.

The WLAN component provides a high-performance, premise-managed Wi-Fi network with broad-range 802.11ac wave 1/2 access points (APs), while FortiGate provides an access security overlay featuring a comprehensive portfolio of security services and granular application control, consolidated on a single, high-performance appliance.

What makes the WLAN controller offering so different is its unique Wi-Fi channel management solution called Virtual Cell which simplifies deployment and scaling, and enables a number of compelling quality-of-experience advantages. These include superior voice mobility due to zero-handoff roaming and more reliable user connections due to real-time load balancing based on actual traffic.

Virtual Cell minimizes the complex, time-consuming process of channel planning, which can take months for a large installation, and it makes capacity scaling easy and disruption-free because existing access points don't need reconfiguration. Virtual Cell also enables mission-critical traffic isolation on a dedicated spectrum—a physical form of internal segmentation that assures optimum performance and combats sophisticated cyberattacks.

The Wireless LAN Manager software further augments the solution, consolidating multiple controllers for configuration and reporting. Advanced features such as spectrum analysis, intrusion detection, prevention, and service assurance management are included at no extra cost.

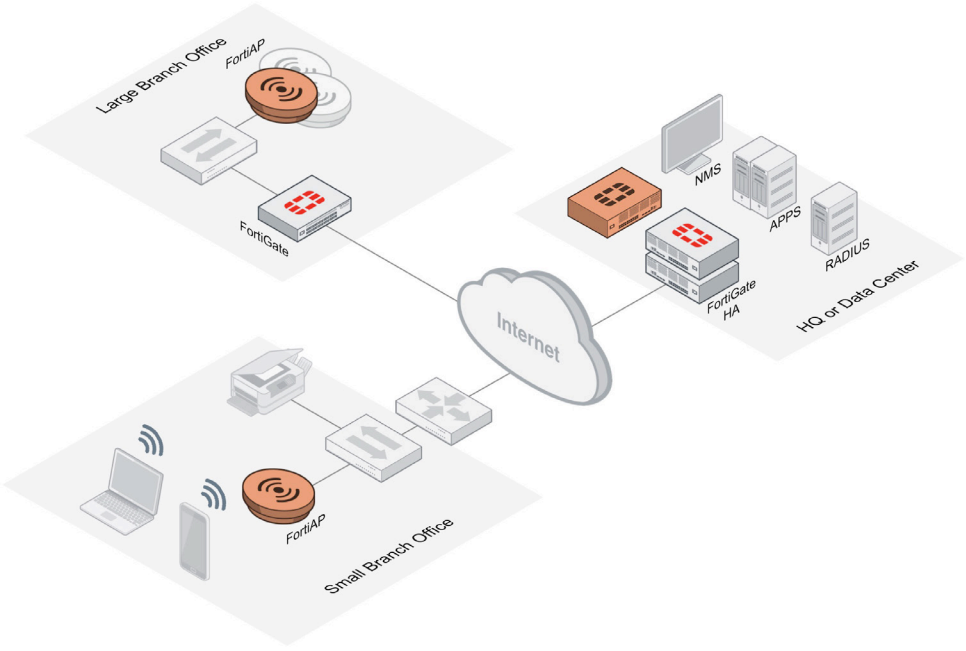


FIGURE 3: FORTINET WLAN CONTROLLER OFFERING

KEY BENEFITS

- Easiest deployment and capacity scaling in the industry
- Better quality of experience with faster, more reliable roaming
- Superior 802.11ac performance
- Bonjour multicast suppression to prevent bandwidth waste
- Comprehensive threat protection provided by one appliance
- Exceptional visibility and control of applications and utilization
- Security kept up to date through regular signature updates from FortiGuard Labs

CLOUD WIRELESS—INDUSTRY'S MOST SECURE, CLOUD MANAGED WI-FI

Fortinet's Cloud Wireless Solution is unlike any other cloud Wi-Fi offering. Based on the FortiCloud Provisioning and Management Service, and a new class of access points, the solution combines advanced security protection at the network access edge, with the simplicity and convenience of cloud management.

Equipped with extra memory and twice the processing power of typical access points, the FortiAP-S series performs real-time security processing on the access point itself, while configuration management and reporting via FortiCloud provides complete visibility of user, device, and application usage, comprehensive threat analysis, and all the identity management tools needed for BYOD onboarding and guest access through captive portals.

Combining Wi-Fi access and network security into the compact footprint of a single AP provides an exceptionally elegant and affordable WLAN solution for SMBs (Small Medium Businesses) and distributed enterprises. It lets users at small and remote sites connect to the Internet safely, without sacrificing security.

Corporate users can still be authenticated against RADIUS servers over the WAN, if desired, or via user accounts provisioned in FortiCloud, while all employee and guest traffic is subjected to enterprise-class cybersecurity protection locally at the network edge. Distributed enterprises can at last implement comprehensive security at remote sites, without needing to alter the security framework at corporate or backhaul all traffic through the corporate network.

KEY BENEFITS

- Comprehensive cybersecurity in remote offices without the cost and complexity of WAN backhaul
- Provisioned and managed remotely through FortiCloud
- Industry's most compact Wi-Fi access with Layer 7 security
- No recurring per-AP licenses
- Layer 7 control to prioritize, block or throttle any application
- PCI-DSS compliance with rogue AP detection and mitigation
- Security kept up to date through regular signature updates from FortiGuard Labs

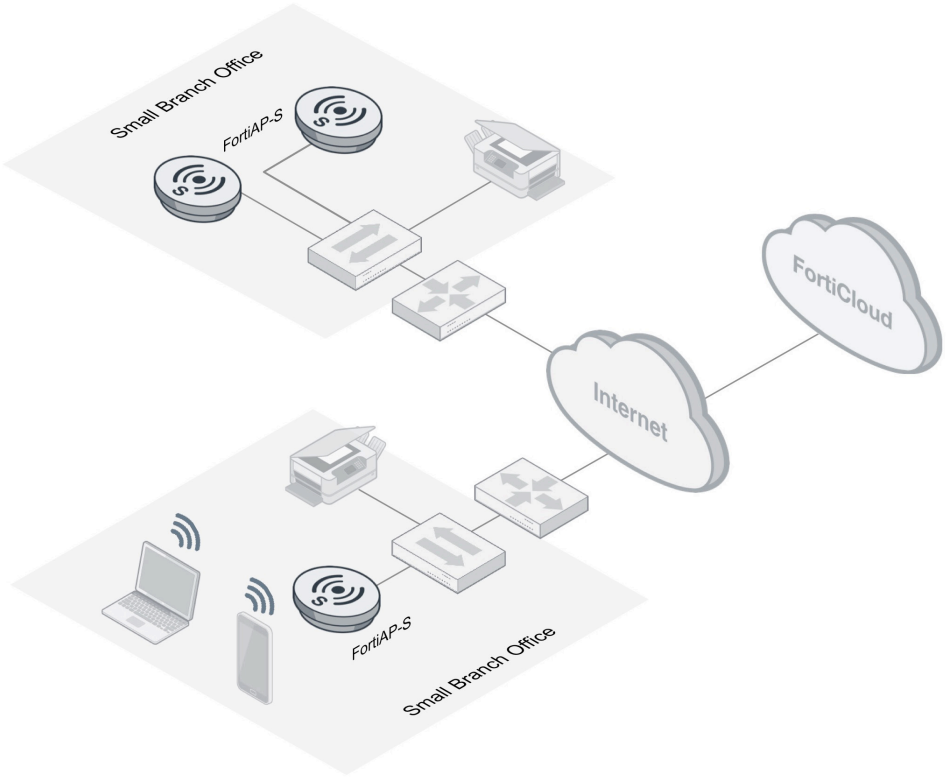


FIGURE 4: FORTINET CLOUD WIRELESS OFFERING

FORTISWITCH—SECURE ACCESS SWITCHING

FortiSwitch Secure Access Switches are feature-rich, yet cost-effective, supporting the needs of enterprise campus and branch office network connectivity. With high-density 24- and 48-port models, which support 802.11at Power over Ethernet (PoE), you can power anything from access points to VoIP handsets and surveillance cameras.

FortiSwitch integrates directly into FortiGate, allowing switch administration and access port security to be managed from the same "single pane of glass." Regardless of how users and devices are connected to the network (wired, wireless, or VPN), you have complete visibility and control over your network security and access.

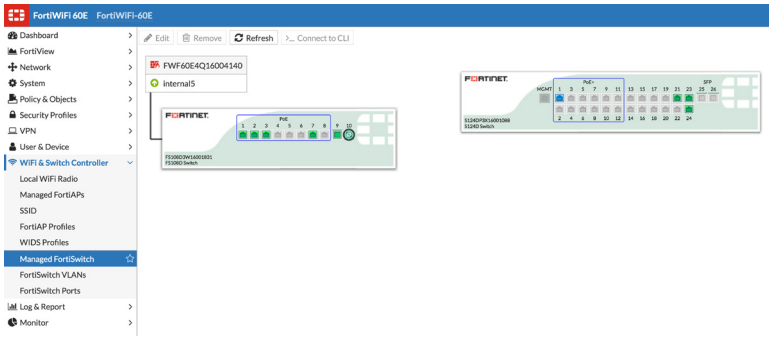


FIGURE 5: FORTIGATE SWITCH MANAGEMENT

FortiSwitch VLANs appear just like any other interface on a FortiGate, meaning you can apply policies to FortiSwitch ports just as you can with FortiGate "WLAN" ports. You even have visibility of per-port and switch-level PoE power usage. Unified control of switches through FortiGate, together with security administration, simplifies remote management and troubleshooting.

INTERNAL SEGMENTATION FIREWALL—UNPRECEDENTED PERFORMANCE

Many campus networks have become flat; however, as cyberattacks become more sophisticated, we now know from recent documented exploits that once hackers breach perimeter defenses, they can wreak havoc on a flat network very quickly.

Multiple layers of defense is the new standard to protect against highly sophisticated attacks that are getting past border defenses. Explicit internal segmentation, with firewall policies between users and resources, limits traffic, gives you logs, and helps to break the infection chain.

But software-based firewalls designed for the perimeter are too slow. Fortinet is first to market with a purpose-built Internal Segmentation Firewall (ISFW) appliance with multi-gigabit line-rate performance.

FORTINET AUTHENTICATION—SCALABLE AUTHENTICATION ECOSYSTEM

Network and Internet access is critical for almost every role within the enterprise; however, this requirement brings with it associated risks. The key objective of every enterprise is to provide secure but controlled network access, enabling the right person the right access at the right time.

Fortinet Authentication solutions include a broad range of flexible options. With support for up to millions of users, Fortinet provides authentication solutions that span from WLAN controller to integrated and cloud offerings. Capabilities include single-sign, social login, and captive portal authentication options that can be integrated with internal or external RADIUS, LDAP, and certificate management systems.

Fortinet authentication can also be part of a complete ecosystem with third-party partners for applications such as payment gateways, booking systems, and Mobile Device Management (MDM).

Many data breaches can be traced back to compromised login credentials obtained via phishing attacks and being used as the initial intrusion vector. Two-factor authentication with FortiToken goes a long way in closing that loophole with standards-based secure authentication to further secure the network. Additionally, Certificate Authority functionality simplifies CA management and delivers user certificate signing, FortiGate VPN, or server x.509 certificates for use in certificate-based, two-factor authentication.

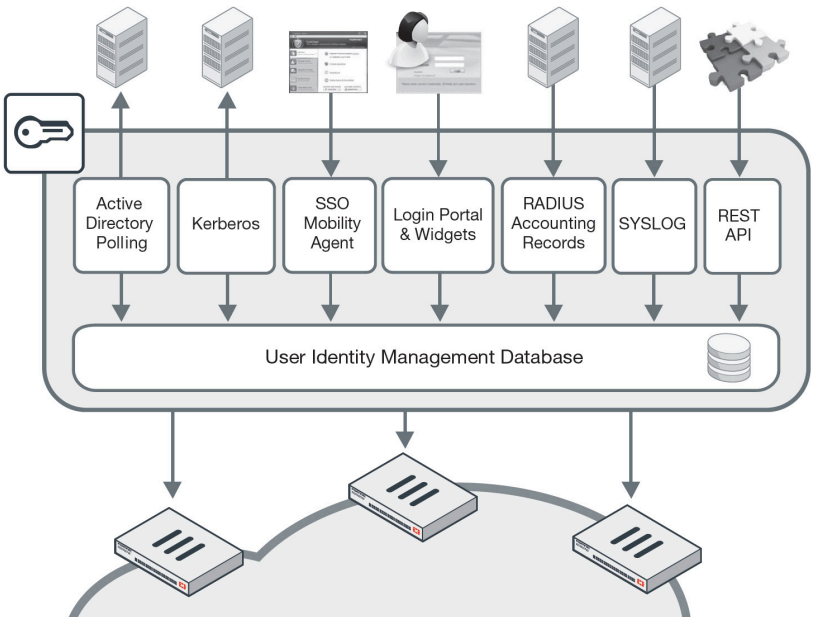


FIGURE 6: FORTIAUTHENTICATOR SINGLE SIGN-ON USER IDENTIFICATION METHODS

FORTINET MANAGEMENT—POLICY MANAGEMENT, ANALYTICS, REPORTING

Fortinet Management solutions support all network solution options including physical, virtual, and public or private cloud. These solutions deliver the versatility you need to effectively manage your Fortinet-based security infrastructure. Fortinet drastically reduces management costs, simplifies configuration, and accelerates deployment.

Key capabilities of Fortinet Management solutions include SSID and radio policy configuration, centralized AP firmware upgrades, real-time client monitoring, and deployment planning. In addition, Fortinet Management includes a multi-tenant portal for delivering Wi-Fi as a service. Our analytics tools provide deep security and wireless analysis and reporting including usage, security logs and forensics, and industry regulatory compliance. Fortinet centralized management is the most flexible and scalable policy, analytics, and reporting system.

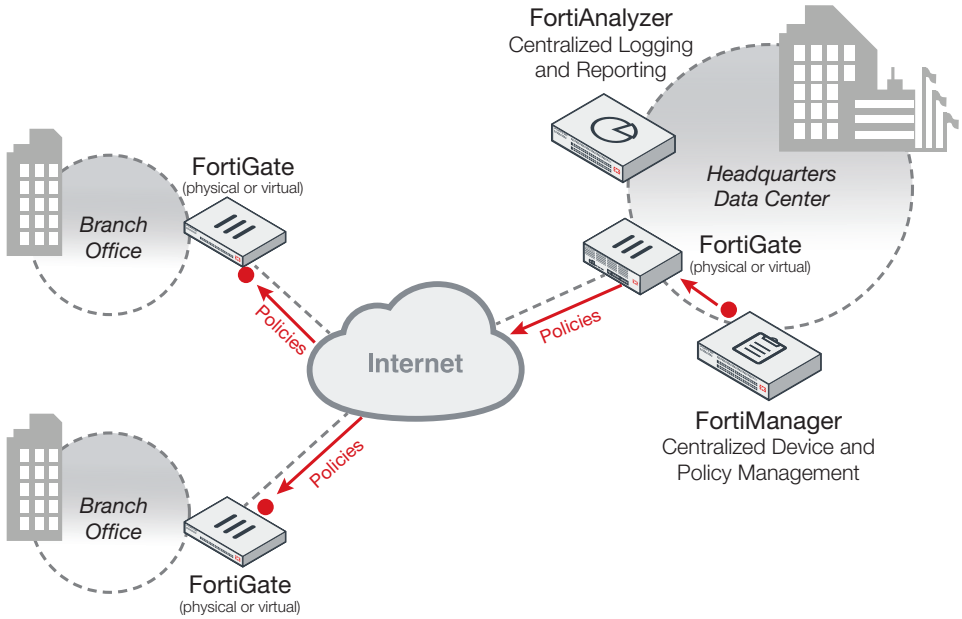


FIGURE 7: FORTIMANAGER CENTRALIZED DEVICE AND POLICY MANAGEMENT

COMPLETELY SECURE ACCESS, NO COMPROMISES

As a global leader in network security, Fortinet provides complete and comprehensive security for the entire access network, no matter how large or small the enterprise, from campus to large office and branch office to the corner shop. Fortinet offers the industry's most extensive network access security, regardless of the size of your business, your network topology, and choice of premises or cloud-based management. The Fortinet Secure Access portfolio delivers the same enterprise-class security in every scenario, without compromises.

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