SOPHOS

XG Firewall and SD-WAN

Sophos Whitepaper April 2019

Contents

Introduction

Few terms in networking have generated as much buzz recently as SD-WAN (or Software Defined Networking in a Wide Area Network). All that buzz has been accompanied by equal doses of useful information and confusing rhetoric. As a result, SD-WAN has grown to mean a lot of different things to different people, while some are still trying to figure out exactly what it means.

Fundamentally, SD-WAN is often about achieving one or more of these four networking objectives:

- **Reduce connectivity costs:** Traditional MPLS connections are expensive and organizations are shifting to multiple more affordable broadband WAN options
- **Business continuity:** Organizations require solutions that will elegantly handle WAN failures and outages and are looking for redundancy, routing, failover, and session preservation
- **Simpler branch office VPN orchestration:** VPN orchestration between locations is often complex and time consuming, so organizations are looking for tools to simplify and automate deployment and setup
- **Quality of critical applications:** Organizations are seeking real-time visibility into application traffic and performance in order to maintain session quality of mission-critical business apps

When considering an SD-WAN solution, it's very important to understand and prioritize your desired goals and objectives before diving into any particular solutions or features.

SD-WAN Features in XG Firewall

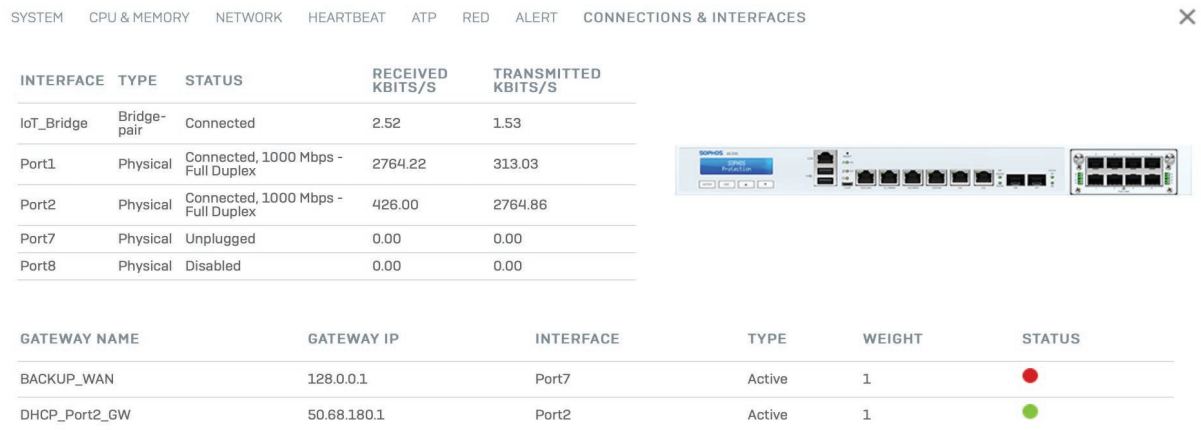
XG Firewall includes the SD-WAN features and capabilities most organizations need to achieve their desired goals. In this section, we'll have a look at the SD-WAN capabilities of XG Firewall.

WAN Links

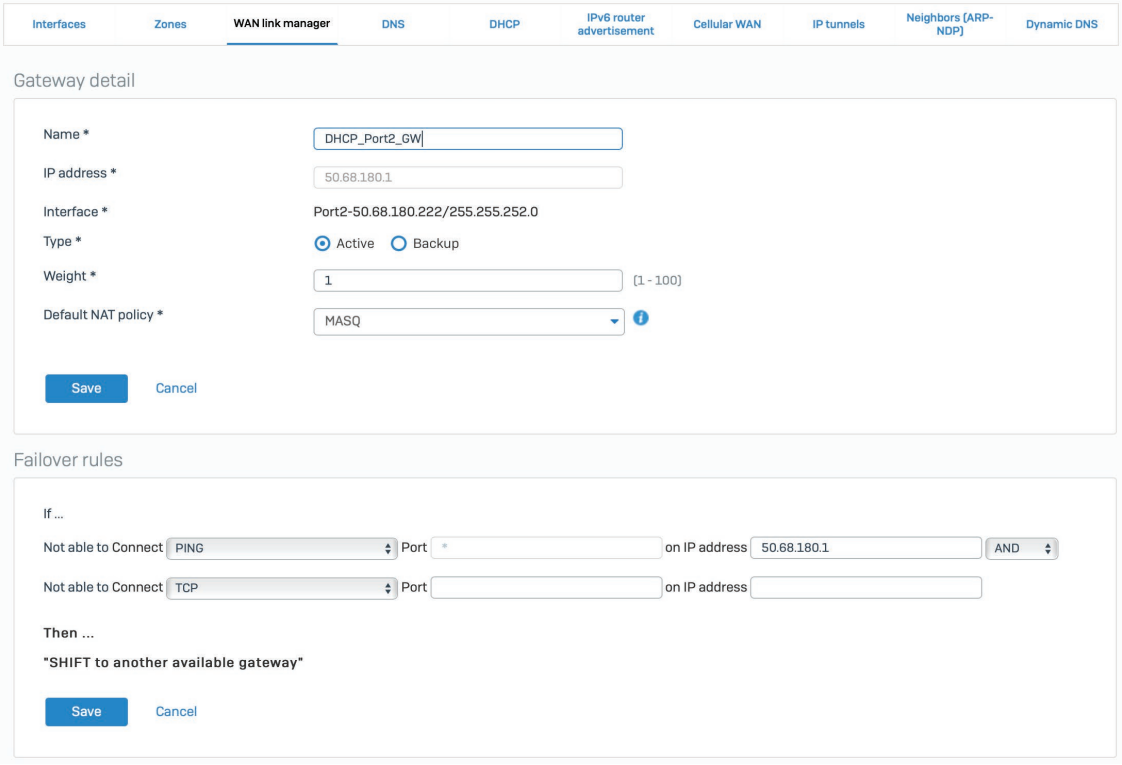
Let's start with the fundamentals of WAN connectivity: flexibility in ISP and WAN connectivity, as well as redundancy and failover in the event of an outage are important considerations.

XG Firewall offers support for multiple WAN links, including a variety of copper, fiber, and even cellular interface options. XG Firewall can terminate MPLS circuits using ethernet handoff and VDSL through our optional SPF modem.

XG Firewall also offers essential WAN link monitoring, balancing, and failover capabilities.



XG WAN Link Status is shown in the bottom of this interface status widget available via the dashboard.

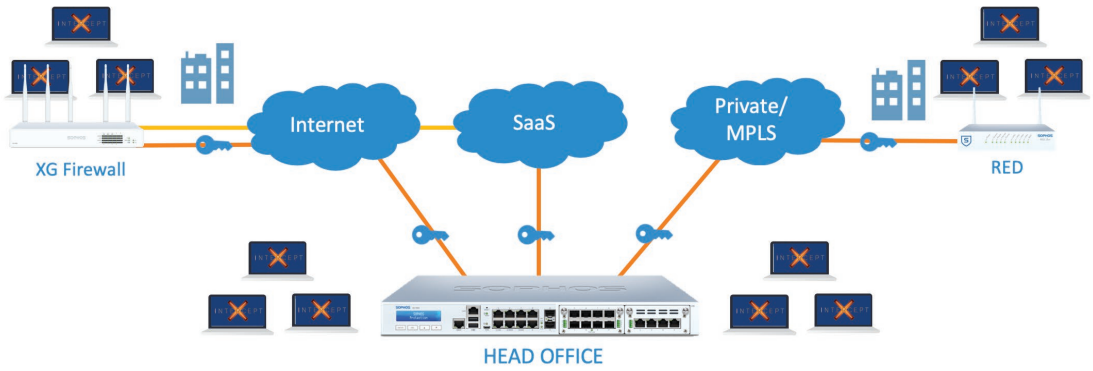


XG Firewall WAN Link Management, including balancing and failover rules.

Branch Office Connectivity

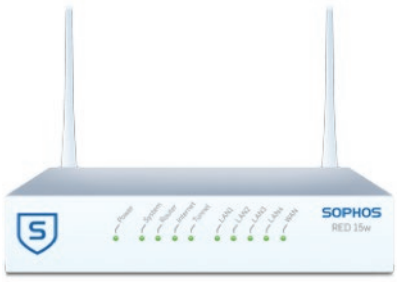
Securely connecting remote branch offices to the each other, central head offices, and various cloud services is another essential component of SD-WAN.

Features like affordable, flexible, and low-touch deployment are very desirable in order to make this as painless and cost-effective as possible, while still supporting a variety of enterprise connectivity requirements.



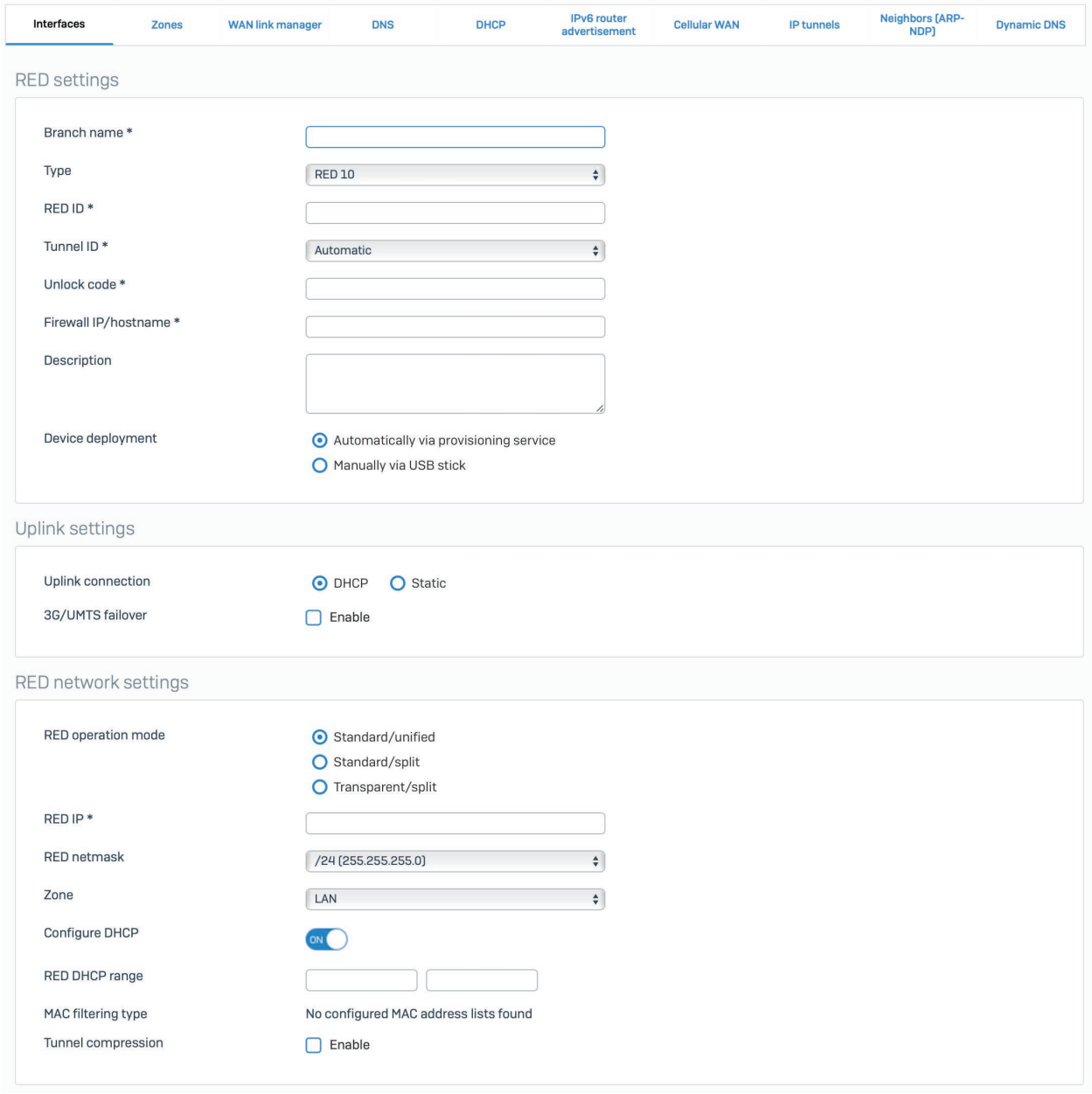
XG Firewall offers unique RED devices and tunnel options to simply and affordably connect branch offices via SD-WAN.

Sophos has long been a pioneer in the area of zero-touch branch office connectivity with our unique SD-WAN RED devices. These affordable devices are extremely easy to deploy by a non-technical person, and provide a robust secure Layer 2 tunnel between the device and a central XG Firewall.



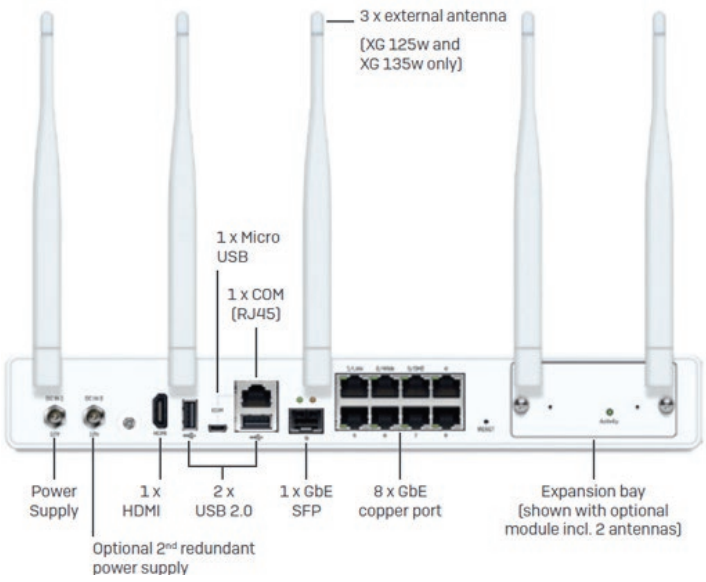
Sophos SD-WAN RED Devices offer a zero-touch, affordable solution to SD-WAN branch connectivity.

Deploying SD-RED devices couldn't be easier: You simply note the serial number of the device in your XG Firewall, and ship the device to the remote location. Any non-technical person on-site simply has to connect the device and it will contact our cloud-provisioning service to automatically establish a secure tunnel connection with your XG Firewall.



Sophos SD-RED offers a flexible, secure, and affordable SD-WAN branch office connectivity solution.

Our desktop XG Series appliances also make excellent branch office SD-WAN connectivity solutions with their flexible connectivity options like VDSL and cellular in addition to copper or fiber interfaces, and also support our robust RED tunnels.



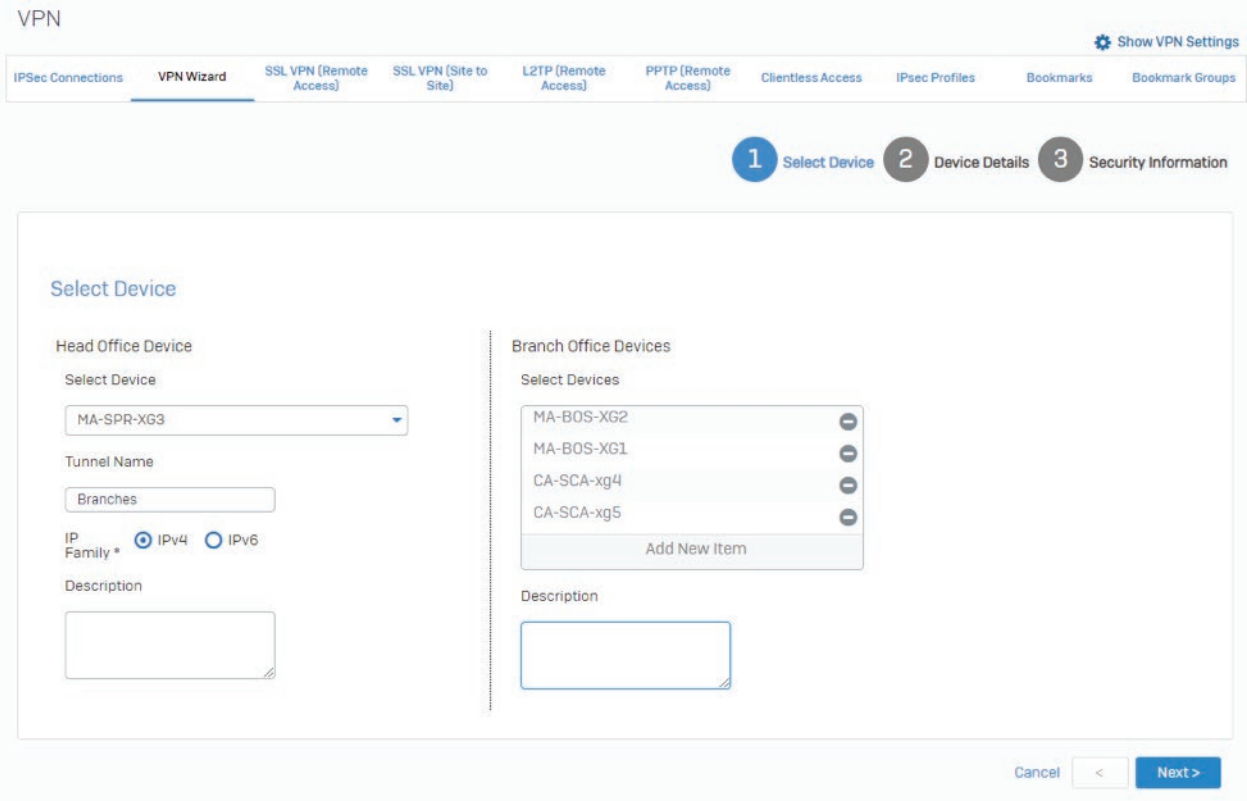
Select desktop models like the XG 135w shown here come with options for LTE/cellular, VDSL, copper, or fiber WAN connectivity options.

VPN Support and Orchestration

Another important capability for achieving many SD-WAN objectives is robust VPN support and easy centralized VPN orchestration.

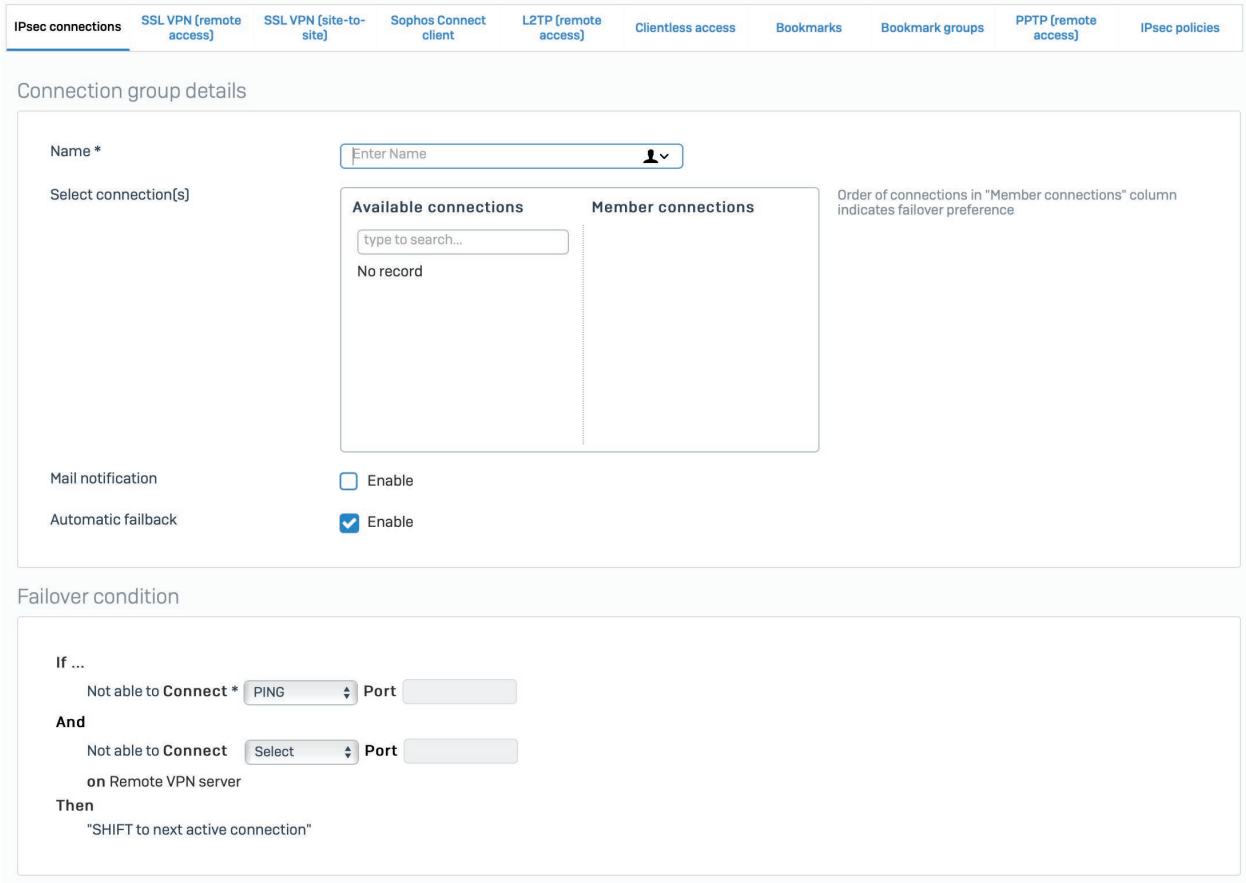
XG Firewall offers support for all the standard site-to-site VPN options you would expect, including IPSec, and SSL. We even offer our own unique RED Layer 2 tunnel with routing that is very robust and proven to work reliably in high-latency situations such as over satellite links.

Sophos Firewall Manager or Central Firewall Manager also offer centralized multi-site VPN orchestration tools to easily setup a mesh of VPN SD-WAN connections.



Sophos Firewall Manager VPN Orchestration Wizard.

XG Firewall also offers a flexible failback option to automatically fail back to the primary VPN connection when a WAN link is restored.

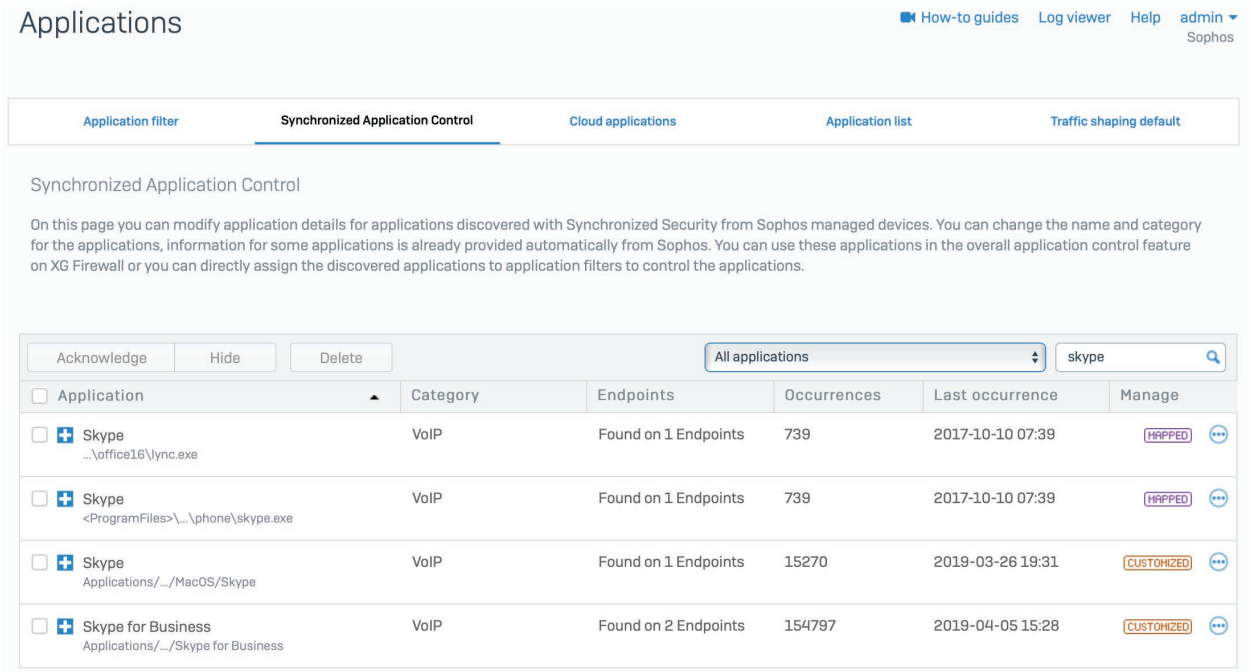


XG Firewall IPSec VPN failover and automatic failback options.

Application Visibility and Routing

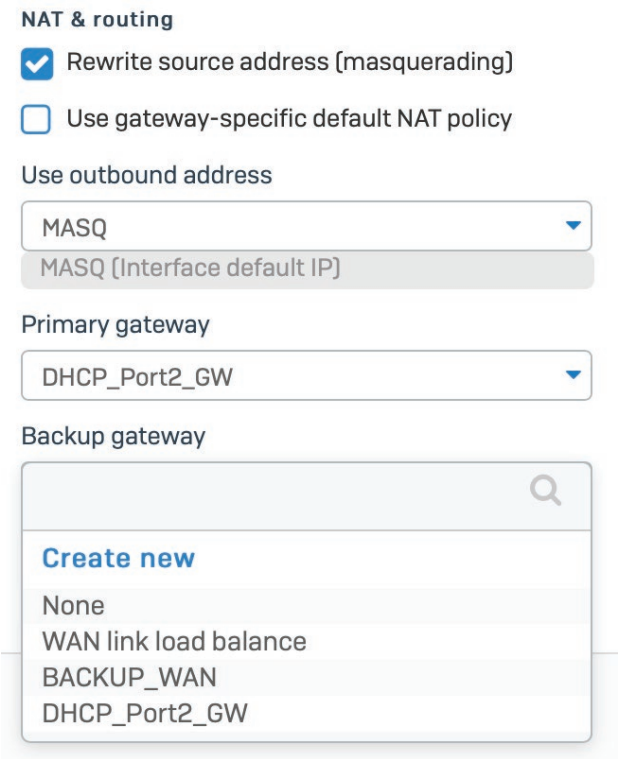
Another important feature for achieving certain SD-WAN objectives is application path selection and routing to ensure quality and minimize latency for mission critical applications like VoIP.

Of course, you can't route what you can't identify, so accurate, reliable application identification and visibility is critically important. This is one area where XG Firewall and Synchronized Security provide an incredible advantage. Synchronized Application Control provides 100% clarity and visibility into all networked applications, providing a significant advantage in identifying mission critical applications, especially obscure or custom applications.

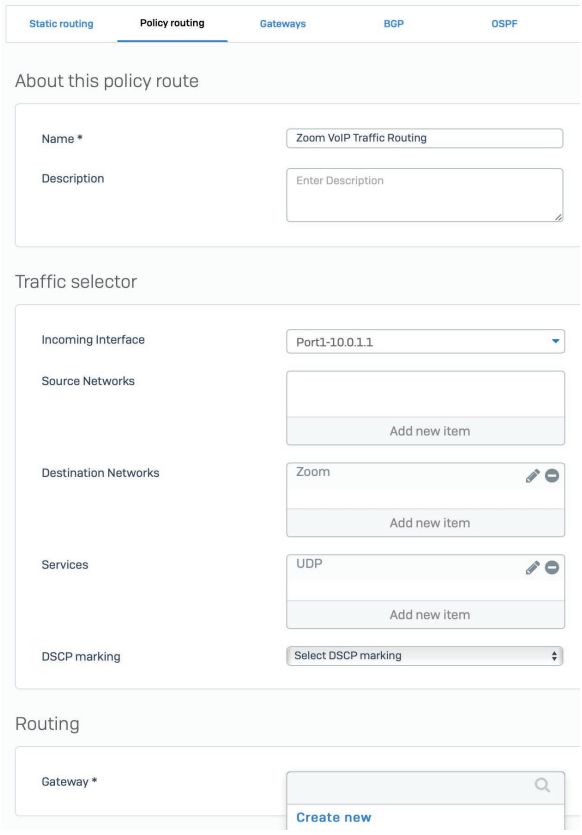


Synchronized Application Control identifies 100% of all networked applications, making it easy to prioritize and route mission critical applications.

XG Firewall also includes application-based routing and path selection in every firewall rule, as well as policy-based routing (PBR), making it easy to direct important application traffic out the optimal WAN interface.

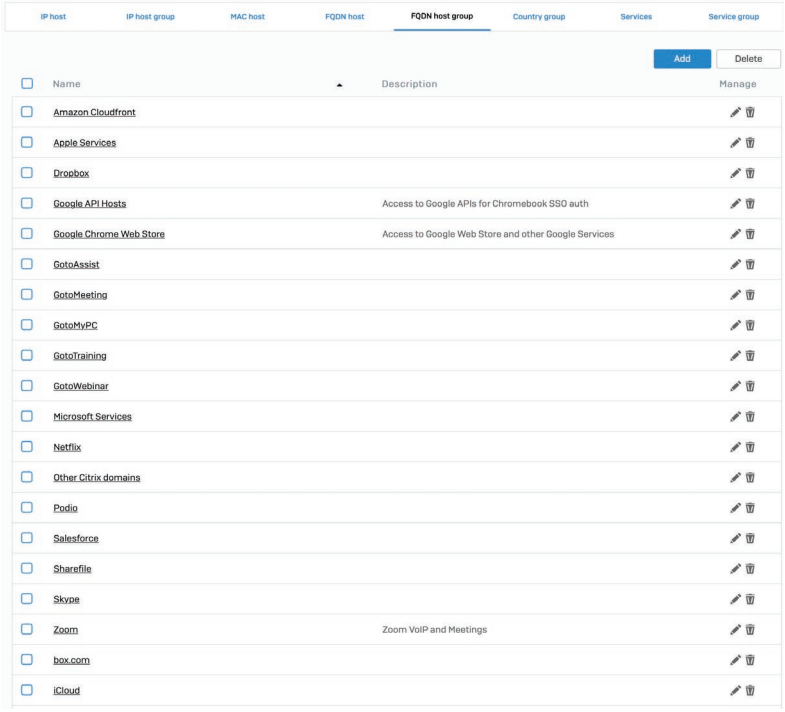


Application-based routing is integrated into every firewall rule, providing the ultimate in flexibility.



Policy-based routing provides flexible tools for routing critical application traffic.

XG Firewall also includes predefined Fully Qualified Domain Name (FQDN) objects for popular SaaS cloud services, with thousands of FQDN hosts definitions included right out of the box and the option to easily add more.



Pre-defined FQDN Host Objects make path selection and application-based routing easy right out of the box.

Summary and What's Next

XG Firewall includes many innovative solutions to help organizations reach their SD-WAN objectives, from great WAN connectivity options to our unique RED SD-WAN appliances to our unmatched application visibility and great routing options.

XG Firewall SD-WAN capabilities:

- **Multiple WAN link options** with MPLS (ethernet handoff), VDSL, and LTE cellular with essential monitoring, balancing, and failover
- **A pioneer in branch office SD-WAN** connectivity with our SD-RED zero-touch deployment devices and robust VPN, as well as our innovative XG Series desktop models
- **Excellent VPN support** for IPSec, SSL, RED secure L2 w/routing, and a central multi-site VPN orchestration via SFM or CFM
- **Unique application control and visibility** with Synchronized App Control, and cloud app visibility with live connection monitoring and bandwidth utilization and out-of-the-box support for major cloud applications
- **Application routing** over preferred links via firewall rules or policy-based routing

Sophos continues to invest in SD-WAN capabilities in upcoming releases including enhancements to link monitoring and selection, new SD-WAN RED devices, zero-touch firewall provisioning, VPN orchestration tools in Sophos Central, and new application routing policies that fully leverage the benefits of Synchronized Application Control.

XG Firewall offers a powerful, flexible network connectivity and security solution for every type of network. Check out our XG Firewall Solution Brief to see how XG Firewall is solving today's top problems with network protection, providing the best firewall visibility, protection, and response in the industry.

United Kingdom and Worldwide Sales
Tel: +44 (0)8447 671131
Email: sales@sophos.com

North American Sales
Toll Free: 1-866-866-2802
Email: nasales@sophos.com

Australia and New Zealand Sales
Tel: +61 2 9409 9100
Email: sales@sophos.com.au

Asia Sales
Tel: +65 62244168
Email: salesasia@sophos.com

© Copyright 2019. Sophos Ltd. All rights reserved.
Registered in England and Wales No. 2096520, The Pentagon, Abingdon Science Park, Abingdon, OX14 3YP, UK
Sophos is the registered trademark of Sophos Ltd. All other product and company names mentioned are trademarks or registered trademarks of their respective owners.

19-4-05 WP-NA (GH)