

Cisco WAAS with AXP and Global Protocols SkipWare in the Cisco Integrated Services Router

In close partnership between Cisco Systems, Inc. and Global Protocols, we now offer an integrated Space Communications Protocol Standards (SCPS)-compliant SkipWare and WAN optimization and acceleration wide area application services (WAAS) solution inside a single-form factor integrated services router. This solution provides industry best-in-class network optimization that meets the Joint IP Modem Specification mandate Mil-Std-2045-44000.

Cisco® Wide Area Application Services (WAAS) is a comprehensive WAN optimization solution that accelerates applications over the WAN, delivers video to the branch office, and provides local hosting of branch-office IT services. Cisco WAAS allows IT departments to centralize applications and storage in the data center while maintaining LAN-like application performance, and provide locally hosted IT services while reducing the overall branch-office device footprint.

Global Protocols (GP) SkipWare was the industry's first commercial implementation of the SCPS Transport Protocol (SCPS-TP). Recognized today as the leading implementation of SCPS in the U.S. Department of Defense (DoD), SkipWare has the largest installed base of any SCPS vendor and has been specified for many of the U.S. DoD's largest tactical and strategic satellite networks.

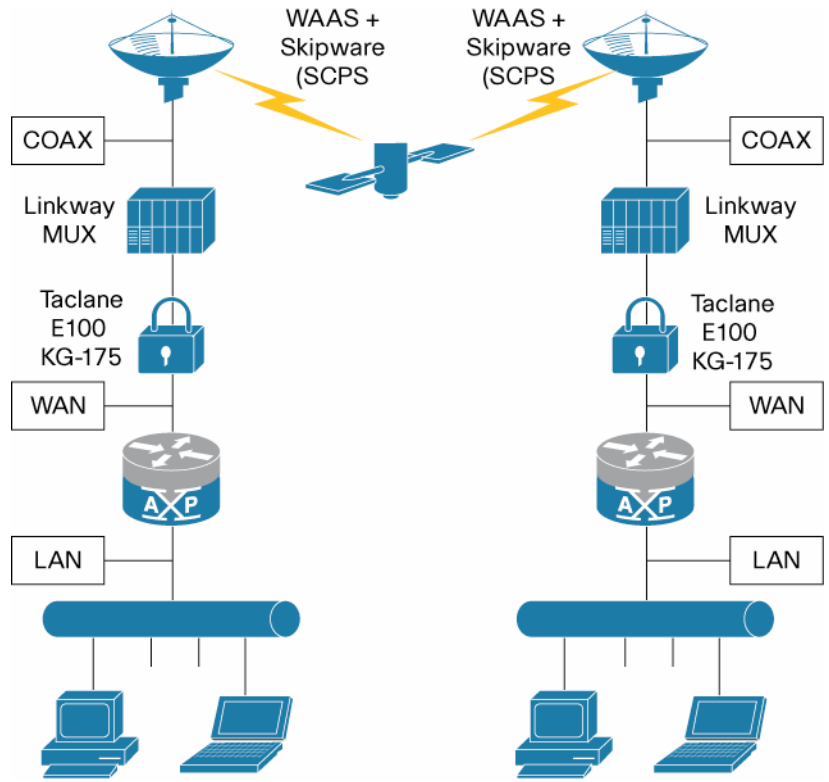
A Single-Box Solution for Cisco WAAS and Global Protocols SkipWare

Cisco partnered with Global Protocols, Inc. in order to integrate the company's industry-leading SCPS-compliant SkipWare onto the Cisco innovative Applications Extension Platform (AXP) module so that we could combine it with the Cisco WAAS Network Module into a one-box solution in the Cisco 3800 Series Integrated Services Router.

For the first time, networks that want the Cisco industry-leading WAAS WAN optimization and Global Protocols' SkipWare can now reduce their footprint by having both inside a single integrated services router. Until this release, networks that had a satellite link and required the mandated SCPS protocol needed to purchase a separate box from Global Protocols in addition to the Cisco WAAS-integrated services router solution that provides WAN optimization and acceleration. This new approach makes it possible for customers to deploy a single-box solution.

Figure 1 shows a sample topology.

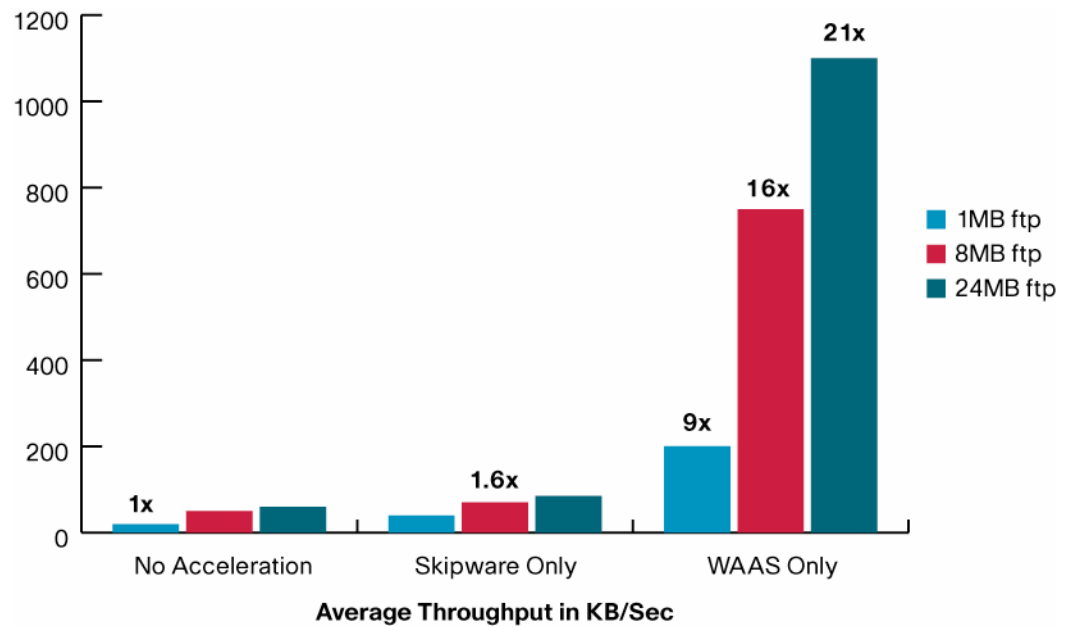
Figure 1. Sample Topology



Cisco WAAS and SkipWare Performance

Figure 2 shows results of a test run by the U.S. Marine Corps (USMC) MCTSSA lab, a standard test used by DoD

Figure 2. Test Results



Both Cisco WAAS and SkipWare show an improvement over nonaccelerated network traffic, translating into improved network usage. The performance tests were executed with components of SkipWare in combination with Cisco WAAS in a Cisco 3845 Integrated Services Router.

The Cisco WAAS Module and SkipWare can be installed in the same Cisco 3800 Integrated Services Router in order to implement WAN windowing and offer the benefits of WAN optimization along with SCPS-compliant acceleration—all in a single box. Both the Cisco 3825 and the Cisco 3845 can be used for this solution, both of which will decrease the size, weight, and power requirements over traditional WAN-SCPS deployments. The Cisco WAAS Network Module has data redundancy elimination (DRE), which provides additional caching and compression features that currently do not exist in a traditional SCPS deployment.

Table 1 lists the features of the Cisco WAAS Network Module and SkipWare.

Table 1. Features of Cisco WAAS Network Module and SkipWare

Global Protocols SkipWare	Cisco WAAS
<p>Description</p> <ul style="list-style-type: none"> • Available in 15- or 45-Mbps WAN rates • SCPS-TP (Mil-Std-2045-44000) • Intelligent congestion control • VLAN support • Generic-routing-encapsulation (GRE) tunnel support • Rate pacing or dynamic bandwidth (per connection) • Automatic window scaling • Optimized for use with common DoD satellite modem technologies • Black hole detection and recovery • Path maximum-transmission-unit (MTU) discovery • Toleration of packet reordering • Data and header compression • Up to 3200 simultaneous accelerated sessions with bypass of additional sessions • Optimized interoperability with other SkipWare-based devices • Asymmetrical route management 	<p>Benefits</p> <ul style="list-style-type: none"> • Transport flow optimization (TFO) • DRE • Adaptive persistent session-based compression • Protocol acceleration • Pass-through authentication, authorization, and locking • Content prepositioning • Cisco WAAS WAN optimization and application acceleration • Network transparency • Client, server, and application transparency • Automatic peer discovery • Monitoring, reporting, traps, and alerts • Application performance management • Out-of-path deployment • Physical inline interception • Redundant WAN link support • Disk encryption • Data access security • Network security

Benefits

- Best-in-class WAN optimization plus best-in-class SCPS implementation—extreme performance
- Single-box solution
- Standard Cisco Technical Assistance Center (TAC) support
- Twelve pounds, several amps, and one rack unit (1RU) eliminated from tactical package (GP's *Turbo IP* box)
- Integration of 24-port Cisco EtherSwitch[®] device for USMC LAN architecture (SWAN) in Cisco 3845 Integrated Services Router
- Backward-compatible to GP's Turbo IP install base

Table 2 gives specifications for the Cisco WAAS Network Module (part number NME-WAE-522), and Table 3 gives specifications for Cisco AXP.

Table 2. Specifications for Cisco WAAS Network Module

Description	Benefits
CPU	1.0- to 1.4-GHz Intel Pentium Celeron (model dependant) processor
Memory (RAM)	2 GB
Storage	1600-GB hard disk

Supported Cisco Routers	Cisco 3800 Series Integrated Services Router (Cisco 3825 or 3845)
Network Interfaces	10/100/1000 Gigabit Ethernet
USB Interface	USB 2.0
Physical Specifications	(H x W x D): 1.55 x 7.10 x 7.2 in. Weight: 1.5 lb

Table 3. Specifications for Cisco AXP

Description	Benefits
WAN Rate	Up to 15 or 45 Mbps
CPU	1.0-GHz Intel Celeron M processor
Memory (RAM)	512 MB
Storage	80-GB hard disk
Supported Cisco Routers	Cisco 2800 Series Integrated Services Router (Cisco 2811 through Cisco 2851) Cisco 3800 Series Integrated Services Router (Cisco 3825 or 3845)
Network Interfaces	10/100/1000 Gigabit Ethernet
USB Interface	USB 2.0
Physical Specifications	H x W x D: 1.55 x 7.10 x 7.2 in. Weight: 1.5 lb

Information

For more information about Global Protocol's SkipWare, Cisco WAAS, or the Cisco Application Extension Platform (AXP), contact:

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