



# Clavister Virtual Core

## Feature-rich next-generation firewall with excellent performance, perfect for the Cloud

#### FEATURES AT-A-GLANCE

- Cost-effective next-generation virtual firewall for any organization, purposely built for SecaaS (Security-as-a-Service), cloud and virtualization security (no rack kit needed)
- Next-generation firewall services, including Clavister True Application Control, Clavister Content Security Services and User Identity Awareness
- Extremely small footprint means the ability to deploy 50-100 more firewalls than our competitors
- Powerful stateful firewall with deep-packet inspection gives you a high level of security
- Flexible, dynamic routing and connectivity with support for link aggregation
- Built-in support for both IPsec and SSL VPN offers easy to use remote connectivity
- Centralized Security Management System included free-of-charge in the Clavister Security Subscription package
- High-end network infrastructure, such as traffic management, High Availability (HA), server load balancing and WAN load balancing, are all included with Clavister Subscriptions
- The perfect for any SecaaS, cloud-based and virtualization security solution

The Clavister Virtual Core Series is a set of network security products designed for virtual and cloud-based security, offering excellent performance, powerful security features and resource efficient. The Clavister Virtual Core Series offers you the same powerful security features you find in our hardware-based products, but for your virtual environment. Easily deploy your Clavister Virtual Core Series in market-leading VMware or KVM virtualization environments. Its minimal footprint and extremely low resource requirements makes the Clavister Virtual Core Series an optimal solution for all types of virtual and cloud-based network security solutions.

## Next-Generation Firewall Services

#### **True Application Control**

Clavister Virtual Core Series fully supports True Application Control – one of our next-generation firewall security services.

Enabling True Application Control will help you to manage applications used in your network more safely. With added security you lower your overall risk exposure and as a result, costly security incidents and downtime can be avoided. It also gives you valuable insight in which applications are used by which user, and can therefore prioritize business critical application and increase your overall business productivity.

True Application Control not only recognize more application and data, it understands how these application behave and can act immediately on malicious behavior.

With its unique support for Deep Application Content Control (DACC) technology, our application control can perform in-depth analysis and control of application content with higher degree of control. DACC enables you to understand and visualize Skype IDs, SQL queries, Facebook chat text, VoIP call information and much more.



#### **Connectivity Choices**

The Clavister Virtual Core Series offers the same flexible routing as all our hardware-based products, but is depended on the capabilities of your host environment.

Clavister Virtual also support link aggregation, which means that you have the added benefit of maximizing throughput and increase the resilience of your system.



#### **RADIUS Relayer – Pinpoint Security**

Clavister Virtual Core Series includes support for RADIUS Relayer, which can provide user information and DHCP IP provisioning for RADIUS-based authenticated users.

For example, when a user roams over from a cellular network to an Enterprise Wi-Fi network for data access. This is useful as it allows for granular user and group-based policing of traffic and controlling access to network resources.



**Advanced Routing** 

The Clavister Virtual Core Series provide an advanced routing engine, including Policy-Based Routing, with seamless route failover. This allow for Dynamic Policy-Based Routing where traffic can be routed based on dynamic events, such as User Identity, latency, HTTP Get responses, etc.

This enable you to create truly flexible and sophisticated policies that reflect the true requirements of your network. Clavister SSL Inspection for Application Control provides a high performance and non-intrusive way to identify and control even SSL encrypted applications. True Application Control is included in the Clavister Security Subscription (CSS) service.

#### **Content Security Services**

Having a regular firewall is not enough to prevent attacks from happening on your network. As attacks become more severe and the threat landscape becomes more dynamic, additional measures need to be in place to protect your network. Clavister offers best-of-breed content security services, including Intrusion Detection and Prevention System, networkcentric Anti-Virus from Kaspersky Labs, and Web Content Filtering to add an additional security layer to your firewall. These content security services protect your network from advanced threats your firewall alone cannot stop. The Content Security Services are included in the Clavister Security Subscription (CSS) service.

#### User Identity Awareness

User Identity Awareness (UIA) provides granular visibility of user identity, and enables you to control network access at the user level. The User Identity Awareness together with our True Application Control functionality will provide you with an extremely powerful and versatile tool for granular visibility and control of "who-does-what-and-when" in your networks. You will have the ability to pinpoint user access to applications across both wired and wireless networks regardless of connecting device.

## **True Security Values**

#### **Clavister Subscriptions**

We believe our customers should have choices. We also believe you should have it all. Therefore we offer you a choice between our comprehensive Clavister Product Subscription (CPS), or our all-inclusive, full service option, Clavister Security Subscription (CSS).

#### **Clavister Product Subscription**

The Clavister Product Subscription contains a high number of product service, such as software updates, centralized management support and flexible service plans.

Finally to ensure you get the best out of your Clavister security gateway, we provide you with around-the-clock support from our award-winning technical support team – your dedicated resource with highly skilled engineers that help you out in case of need. The Clavister Product Subscription keeps your Clavister updated, online and ready for business twenty-four-seven.

#### **Clavister Security Subscription**

Clavister Security Subscription is a complete, all inclusive suite of product services. It contains all the services you get with Clavister Product Subscription, but extends the service offering by including a full set of nextgeneration firewall services, such as Clavister True Application Control, Web Content Filtering, Anti-Virus and Intrusion Detection and Prevention (IDP).

CSS offers best-in-class content services, which protect you from the more advanced types of malware and exploits. It grants you access to the latest software and signature updates keeping your infrastructure up to date and increasingly more stable and secure.

All Clavister Subscriptions are available in 12, 24, 36, 48 and 60 months service terms, offering you maximum security and flexibility.

For more information about Clavister Subscriptions, see the separate Clavister Subscriptions brochure.

#### True Flexibility - Get more performance when you need it

Clavister Virtual Core Series is available in four models, each addressing specific customer requirements. Should your performance needs increase, Clavister offers you the flexibility to upgrade to a more powerful Clavister Virtual Core Series. Just simply order the upgrade to your preferred Clavister Virtual Core Series model and install the new license file. It is as simple as that. And given the Clavister Virtual Core Series extremely small footprint, you probably do not need to upgrade your server hardware. It will all fit in quite nicely.

This makes Clavister Virtual Core Series a low risk choice in dynamic business environments where requirements can change overnight. Clavister provides you the performance when you need it, avoiding high up front investment costs to your security infrastructure or having to worry about costly upgrades.

#### Uptime Technologies

Clavister Virtual Core Series comes with powerful features to ensure that your network infrastructure is online and ready for work. Features like High Availability (HA) is fully supported, as well as Fast Route Failover technologies and link aggregation, which ensures that your business is not affected by network downtime caused by link failure or hardware problem. It also support flood protection technologies to increase uptime in case your network is subjected to a Denial-of-Service (DoS) attack.

#### **Powerful Firewall**

The Clavister Virtual Core Series is a next-generation firewall, but it also has all the traditional security features, such as stateful firewall with deep-packet inspection, and it is powered by our own in-house developed network security operating system, the Clavister cOS Core. As well as providing all traditional firewall functions, such as port blocking and proxy server, all Clavister firewall solutions incorporate next-generation firewall features to detect and block sophisticated application-level attacks. This means higher level of security, higher traffic throughput and minimal use of system resources.

#### Performance

Clavister Virtual Core Series provides next-generation security services across all points of your network without sacrificing performance throughput. Purpose-built hardware running on our highly efficient network security operating system ensures that the firewall performance throughput is one of the highest in the industry, making sure that your Clavister firewall will not be a bottleneck in your network infrastructure.

#### Simplicity

We strive to make things easy to understand and easy to use. This includes everything from hardware design to security management. We build highly customizable enterprise-grade firewalls, and despite the inherent complexity, we make an effort of making it easy to use. For example, our highly acclaimed centralized security management system, Clavister InControl uses color-coded attribute groups to provide a clear overview over dependencies that the firewall rules have to each other, making human errors less likely to occur. By combining policies and services into one, firewall policy management can be simplified and more easy to use. This results in fewer policy rules, making it easier to manage and less likely to cause a security breach.

## All-Inclusive Security Management

For any network, security management is one of the more important aspects. It has to be intuitive, efficient and easy to use For large enterprises, with multiple firewalls at multiple sites, and even in geographical disperse areas, keeping your security management consistent and cohesive, and up to date is a non-trivial task. All these security management systems are included with our Clavister cOS Core products – free of charge.

#### Clavister InControl - Centralized Security Management

Clavister InControl offers a comprehensive centralized management solution that will assist and help administrators perform their daily tasks faster, easier and in a more streamlined way. Its intuitive user interface and support for task-driven workflow management guides administrators through complex and repetitive tasks, thereby alleviating the burden of managing large installations. With support for triple-AAA (Authentication, Authorization and Audit) the integrity and configurations managed by the Clavister InControl system is kept under strict control. This level of control makes it easy to use delegated management, allowing specific teams and personnel to access only designated parts of the system. Clavister InControl can be extended to collaborate with a vast number of other management system with the use of Clavister InControl Software Development Kit (SDK). The Clavister InControl SDK enables organizations to integrate and extend existing system management tools with Clavister InControl management. For example, optimized provisioning systems, integrated help desk functionality.

#### Splunk for Clavister

Splunk for Clavister cOS Core is a comprehensive Webbased reporting system that offers enterprise-level reporting with tight integration with all Clavister cOS Core-based products. Splunk supports real-time data analysis, with Key Performance Indicators (KPI), graphs, tables and long-term trending, scaling from a single Clavister security gateway to large data centers.

The Splunk for Clavister cOS Core enables you to visualize your Clavister security solution, including pinpointing problem areas, thwarted attacks and other security issues, and then turn them into business-level reports. You can also take advantage of the built-in scheduling and distribution features to make sure the right people get the right reports on time.

### Other Management Options

In addition to our centralized management solution, we also provide the Clavister Web Management system, an easy-touse Web-based security management solution that works for smaller installations with just a few firewalls. Each product also supports our comprehensive command-line interface (CLI), enabling you to script common tasks.

#### **Next-Generation Firewall Security**

By integrating world-class Next-Generation Firewall functionality, such as our Clavister True Application Control, Intrusion Detection and Prevention (IDP), Anti-Virus, Anti-Spam and Web Content Filtering with a stateful firewall with deep packet inspection, IPsec and SSL VPN connectivity, we are able to protect your organization against everything from network layer attacks to application layer threats, and even viruses and worms. While you have full control of who does what, when and with what.

#### Clavister cOS Core

Clavister cOS Core is our in-house developed, high-performance security network operating system. Every line of code is carefully crafted to ensure that it delivers maximum performance at all times. We take pride in delivering a product that we have full control over, rather than a mashup of open-source components.

#### Flexibility and Adaptability

Not all networks are created equally. Vast differences in network topology and configuration require a network security gateway to be able to accommodate all these differences. Our security gateways gives you the freedom to set routing policies with extreme granularity. A large number of parameters can be used to construct policies and rules to meet even the most demanding network installation.







#### Big on Performance - Low on Maintenance

All Clavister security gateways share a common trait: they all support Clavister Service Provisioning Network (CSPN). This secure, high-speed network ensures that all Clavister Security Subscription services are kept updated and current from newly emerging threats. This gives system administrators the freedom to concentrate on running their network without having to worry about having the latest security patches installed.

#### License Scalability

One important aspect of our products is scalability. Our licensing model offers you the ability to start with your performance needs today and upgrade your product incrementally as your organization grows. You also have the choice of two subscriptions models: the Clavister Security Subscription, our all-inclusive subscription, or the regular Clavister Product Subscription.

#### Low Total Cost of Ownership

Our goal is to provide a complete security solution that is more cost efficient than our competitors. Clavister security gateways, with their unique set of integrated security features, world-class service and support, and their powerful administration system, enables you to spend less time managing your security environment and keep your network defenses up to date, and thereby lower your network security infrastructure TCO significantly.

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Performance* and Capacity	Clavister V2	Clavister V3	Clavister V5	Clavister V7	Clavister V9	Clavister V10
Firewall Performance (plaintext throughput)	300 Mbps	1 Gbps	2 Gbps	3 Gbps	6 Gbps	10 Gbps
IPsec VPN Performance (large packets)	150 Mbps	500 Mbps	1 Gbps	2 Gbps	3 Gbps	5 Gpbs
Maximum Concurrent Connections	16,000	64,000	128,000	250,000	512,000	2,000,000
Maximum Concurrent IPsec VPN Tunnels	25	500	1,000	1,500	3,000	5,000
Maximum Concurrent L2TP/PPTP/SSL VPN Tunnels	25	500	1,000	1,500	3,000	5,000
Maximum Number of Users	Unrestricted	Unrestricted	Unrestricted	Unrestricted	Unrestricted	Unrestricted
Maximum Number of Routing Tables (Virtual Routers)	5	25	50	100	200	1,000
Connectivity	Clavister V2	Clavister V3	Clavister V5	Clavister V7	Clavister V9	Clavister V10
Ethernet Interfaces	Up to 3	Up to 4	Up to 6	Up to 8	Up to 10	Up to 10
Interfaces for Management / High Availability (HA)	n/a	n/a	n/a	n/a	n/a	n/a
Configurable Internal / External / DMZ Ports	n/a	n/a	n/a	n/a	n/a	n/a
RS-232 Console Ports	n/a	n/a	n/a	n/a	n/a	n/a
Link Aggregation IEEE 802.1AX-2008 (Static/LACP)	Yes	Yes	Yes	Yes	Yes	Yes
Maximum Number of VLAN Interfaces IEEE 802.1Q	8	32	256	512	1,024	2,048
Support for High Availability (HA)**	No	Yes	Yes	Yes	Yes	Yes
Service-VLAN Interfaces IEEE 802.1ad (Q-in-Q)	Yes	Yes	Yes	Yes	Yes	Yes
Product Specific Specification	Clavister V2	Clavister V3	Clavister V5	Clavister V7	Clavister V9	Clavister V10
Form Factor	Software					
Supported Virtual Platforms	VMware ESXi, KVM					

\* Actual performance may vary depending on network conditions, number of activated services and host hardware capabilities.

\*\* When using High Availability clusters in virtual environments, the hardware settings for each interface must be identical on both cluster nodes (bus, slot and port).

## Where to Buy Clavister

For more information about where to buy Clavister products, visit <u>www.clavister.com/partners</u>. Additional resources and customer testimonials can be found at <u>www.clavister.com/resources</u>

## Product Features

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Server Load Balancing (SLB)         Reund-Rabin, Connection-Rate           SLB Distribution Methods         Round-Rabin, Connection-Rate           SLB Monitoring Methods         ICMP Echo, Cuttom TOP port, HTTP Request/Response           SLB Server Stickness         State, IP Address, Network           Mode of Operations         Yes           Routing Motiods         Yes           Routing GLAP (3)         Yes           Routing GLAP (3)         Yes           Routing State, IP Address, Network         Yes           Routing State Routing Mode         Yes           Routing State Routing Mode         Yes           Routing Top State Routing Yes         Yes           Multice Routing Tables         Yes           Scheduled Policy-Based Routing Yes         Yes           Multice Routing Tables         Yes           Loopback Interfaces         Yes           Route Icad Balancing (Equal-Cost Multipath)         Yes           Route Balancing Returds         Yes           Route Balancing Returds         Yes           Route Balancing Returds         Yes           Route Cast Balancing (Equal-Cost Multipath)         Yes           Route Cast Balancing (Equal-Cost Multipath)         Yes           Route Cast Routing         Yes      <	Static Destination Translation (Virtual IP/Port Forward)	Yes
SLB Distribution Methods         Pound-Robin, Connection-Rate           SLB Source Stockness         ICMP Echo, Custom TCP Port, HTTP Request/Response           SLB Source Stockness         State, IP Address, Network           Mode of Operations         Yes           Transparent Mode (Layer 2)         Yes           Need Transparent Mode (Layer 3)         Yes           Mode of Derations         Yes           Routing Mode (Layer 3)         Yes           Need Transparent Mode (Layer 3)         Yes           State Routing (PER)         Yes           State Routing Traines         Yes           Loopback Interfaces         Yes           Route Loopback Interfaces         Yes           Route Montoring Methods         ARP, ICMP Echo, Custom TCP Port, HTTP Request/Response           Surce-Based Routing         Yes           Route Montoring Methods         ARP, ICMP Echo, Custom TCP Port, HTTP Request/Response           Surce-Based Routing         Yes           Route Mottoring Methods         ARP, ICMP Echo, Custom TCP Port, HTTP Request/Response <td>NAT Hairpinning</td> <td>Yes</td>	NAT Hairpinning	Yes
SLB Monitoring Methods         ICMP Echo, Custom TCP Port, HTTP Request/Response           SLB Server Stickless         State, IP Address, Network           Mode of Operations         Yes           Tinnsparent Mode (Layer 3)         Yes           Mode flayer 3)         Yes           Mode flayer 3)         Yes           Mode Tomparent and Routing Mode         Yes           Bouting         Yes           State Routing         Yes           Sche Adulting Mode         Yes           Sche Adulting Mode         Yes           Sche Adulting (PER)         Yes           Sche Adulting Tables         Yes           Multiple Routing Tables         Yes           Lopback Interfaces         Yes           Route Dard Bationing (Equal-Cost Multipath)         Yes           Route Failover         Yes           Policy-Based Dynamic Routes         Yes           Policy-Based Dynamic Routes         Yes           OSFFV2 Routing Process (FFC2228)         Yes           OSFFV2 Routy Proces         Yes           Multicast Forwarding         Yes           Multicast Forwarding         Yes           IQMP-Roy (RPC3376)         Yes           IQMP Proxy Mode         Yes	Server Load Balancing (SLB)	
SLB Monitoring Methods         ICMP Echo, Custom TCP Port, HTTP Request/Response           SLB Source Status, IP.Address, Network           Mode of Operations           Transparent Mode (Layer 3)         Yes           Mode flayer 3)         Yes           Static Routing Mode (Layer 3)         Yes           Static Routing flag         Yes           Static Routing (PER)         Yes           Static Routing (PER)         Yes           Scheduled Policy-Based Routing (PER)         Yes           Multiple Routing Tables         Yes           Multiple Routing Tables         Yes           Could Bouting (Rout-Cost Multipath)         Yes           Route Routing (Rout-Cost Multipath)         Yes           Route Bouting (Rout-Cost Multipath)         Yes           Route Bouting Process (RFC2228)         Yes           Paticy-Based Dynamic Routes         Yes           OSFFV2 Routing Process (RFC2228)         Yes           Multicast Forwarding         Yes           Multicast Forwarding         Yes           Multicast Forwarding <thyes< th=""></thyes<>	SLB Distribution Methods	Round-Robin, Connection-Rate
SLB Server Stockiness         State, IP Address, Network           Mode Of Operations         Transparent Mode (Layer 2)           Rouling Mode (Layer 3)         Yes           Rouling Teapsparent and Rouling Mode         Yes           Rouling Teapsparent and Rouling (PBR)         Yes           Scheduled Policy-Based Rouling (PBR)         Yes           Scheduled Policy-Based Rouling (PBR)         Yes           Multiple Rouling Tables         Yes           Loopback Interfaces         Yes           Roule Laobad Balancing (Equal-Cost Multipath)         Yes           Roule Balancing (Equal-Cost Multipath)         Yes           Roule Fallower         Yes           Roule Balanceg (Equal-Cost Multipath)         Yes           Roule Fallower         Yes           Boute Scovery         Yes           Roule Rouling         Yes           Policy-Based Dynamic Routing         Yes           OSFFV2 Routing Process (RFC3230)         Yes           (GMP-Yo, GPC3370)         Yes           (GMP-Yo, GPC3370)         Yes	SLB Monitoring Methods	
Mode of Operations           Transparet Mode (Layer 2)         Yes           Routing Mode (Layer 3)         Yes           Routing Policy-Based Routing (PBR)         Yes           Static Routing (PBR)         Yes           Multiple Routing Tables         Yes           Loopback Interfaces         Yes           Route Load Balancing (Equal-Cost Multipath)         Yes           Route Routing         Yes           Paticy-Based Dynamic Routing         Yes           Operations Routing         Yes           OSPFY2 Routing Process (FPC3228)         Yes           Multicast Forwarding         Yes           Multicast Forwarding         Yes           IGMP-PA2 Grompatibility Mode (FPC228)         Yes <t< td=""><td>·</td><td></td></t<>	·	
Transparent Mode (Layer 2)     Yes       Rouling Mode (Layer 3)     Yes       Mixed Transparent and Routing Mode     Yes       Static Routing     Yes       Static Routing (PBR)     Yes       Scheduled Policy-Based Routing     Yes       Wutal Routing     Yes       Multiple Routing (PBR)     Yes       Scheduled Policy-Based Routing     Yes       Multiple Routing Tables     Yes       Loopback Interfaces     Yes       Route allower     Yes       Route allower     Yes       Route Rollower     Yes       Route Rollower     Yes       Route Rollower     Yes       Route Rollower     Yes       Palicy-Based Douling     Yes       Policy-Based Douling     Yes       Policy-Based Douling     Yes       Policy-Based Douling     Yes       Policy-Based Douling     Yes       OSFFy2 Routing Process (FFC2328)     Yes, multiple       OSFFy2 Routing Process (FFC2328)     Yes       Multicast Forwarding     Yes       IGMP 20 (RPG1383)     Yes       IGMP 20 (RPG1384)     Yes<		
Routing Mode (Layer 3)         Yes           Mued Transparent and Routing Mode         Yes           Routing         Yes           Routing         Yes           State Routing (PBR)         Yes           Scheduled Policy-Based Routing         Yes           Virtual Routing (PBR)         Yes           Scheduled Policy-Based Routing         Yes           Witple Routing Tables         Yes           Loopback Interfaces         Yes           Route Fallover         Yes           Route Road Balancing (Equal-Cost Multipath)         Yes           Source-Based Routing         Yes           OSPFV2 Routing Process (RFC2328)         Yes           OSPFV2 Routing Process (RFC2328)         Yes           Multicast Forwarding         Yes           IGMP V2 C	-	Vae
Mode Transparent and Routing Mode         Yes           Routing         Yes           Static Routing (PBR)         Yes           Scheduled Policy-Based Routing (PBR)         Yes           Scheduled Policy-Based Routing         Yes           Virtual Routing Tables         Yes           Loopback Interfaces         Yes           Route Load Balancing (Equal-Cost Multipath)         Yes           Route Failover         Yes           Source-Based Routing         Yes           Policy-Based Dynamic Routes         Yes           OSPFv2 Routing Process (RFC2328)         Yes           OSPFv2 Routing Process (RFC2328)         Yes           OSPFv2 Routing Process (RFC2328)         Yes           IGMP 20 compatibility Mode (RFC2230)         Yes           IGMP 20 compatibility Mode (RFC2330)         Yes           IGMP 20		
Routing         Yes           State Routing         Yes           Policy-Based Routing (PBR)         Yes           Scheduled Policy-Based Routing         Yes           Virtual Routing         Yes           Wittpie Routing Tables         Yes           Loopback Interfaces         Yes           Route Load Balancing (Equal-Cost Multipath)         Yes           Route Monitoring Methods         ARP, ICMP Echo, Custom TCP Port, HTTP Request/Response           Source-Based Routing         Yes           Route Monitoring Methods         ARP, ICMP Echo, Custom TCP Port, HTTP Request/Response           Source-Based Routing         Yes           Path MTU Discovery         Yes           Path MTU Discovery         Yes           Policy-Based Conting Process (RFC2326)         Yes, multiple           OSFP-V2 Routing Process (RFC2326)         Yes           OSFP-V2 Routing Process (RFC2326)         Yes           Multicast         Yes           Multicast Forwarding         Yes           IGMP Proxy Mode         Yes           IGMP Proxy M		
Static Routing     Yes       Policy-Based Routing (PBR)     Yes       Scheduled Policy-Based Routing     Yes       Virtual Routing Tables     Yes       Loopback Interfaces     Yes       Route Load Balancing (Equal-Cost Multipath)     Yes       Route Fallover     Yes       Route Icad Balancing (Equal-Cost Multipath)     Yes       Route Fallover     Yes       Route Fallover     Yes       Route Monitoring Methods     ARP, ICMP Echo, Custom TCP Port, HTTP Request/Response       Source-Based Routing     Yes       Path MTU Discovery     Yes       Dynamic Routing     Yes       OSPFv2 Routing Process (RFC2328)     Yes, multiple       OSPFv2 Routing Process (RFC2328)     Yes, multiple       OSPFv2 Routing Process (RFC2328)     Yes       Muticast Forwarding     Yes       Muticast Forwarding     Yes       Muticast Forwarding     Yes       IGMP-V2 Compatibility Mode     Yes       IGMP-V3 (RFC3376)     Yes       IGMP-V3 (RFC3376)     Yes       IGMP Proxy Mode     Yes       IGMP-V3 Pass-through     Yes       DHCP Pass-through     Yes       DHCP Pass-through     Yes       DHCP Pass-through ICM Protocols     Yes       Spanning Tree BPU U Relaying <td< td=""><td>· •</td><td>tes</td></td<>	· •	tes
Policy-Based Routing (PBR)         Yes           Scheduled Policy-Based Routing         Yes           Multiple Routing Tables         Yes           Multiple Routing Tables         Yes           Loopback Interfaces         Yes           Route Load Balancing (Equal-Cost Multipath)         Yes           Route Fallover         Yes           Route Fallover         Yes           Route Fallover         Yes           Route Routing Methods         ARRP, ICMP Echo, Custom TCP Port, HTTP Request/Response           Source-Based Routing         Yes           Policy-Based Dynamic Routes         Yes           Policy-Based Dynamic Routes         Yes           OSPFV2 Routing Process (RFC2328)         Yes           Multicast         Yes           Multicast Forwarding         Yes           IGMPN2 Compatibility Mode (RFC2326)         Yes           IGMPN2 Route (Jet Prody Mode         Yes           IGMPN2 Rospon Mode         Yes           IGMPN2 Rosponp Mode         Yes		λ <i>ί</i>
Scheduled Policy-Based Routing         Yes           Virtual Routing         Yes           Multiple Routing Tables         Yes           Loopback Interfaces         Yes           Route Load Balancing (Equal-Cost Multipath)         Yes           Route Load Balancing (Equal-Cost Multipath)         Yes           Route Indicover         Yes           Route Monitoring Methods         ARP, ICMP Echo, Custom TCP Port, HTTP Request/Response           Source-Based Routing         Yes           Path MTU Discovery         Yes           Path MTU Discovery         Yes           Path MTU Discovery         Yes           Policy-Based Dynamic Routes         Yes           OSPFv2 Routing Process (RFC2328)         Yes, multiple           OSPFv2 Routing Process (RFC2328)         Yes           OSPFv2 over VPN         Yes           Multicast Forwarding         Yes           IGMPv2 Compatibility Mode (RFC2236)         Yes           IGMPv3 (RFC3376)         Yes           IGMP Proxy Mode         Yes           IGMP Proxy Mode <td< td=""><td></td><td></td></td<>		
Vitual Routing         Yes           Multiple Routing Tables         Yes           Loopback Interfaces         Yes           Route Load Balancing (Equal-Cost Multipath)         Yes           Route Load Balancing (Equal-Cost Multipath)         Yes           Route Icad Balancing (Equal-Cost Multipath)         Yes           Route Monitoring Methods         ARP, ICMP Echo, Custom TCP Port, HTTP Request/Response           Source-Based Routing         Yes           Path MTU Discovery         Yes           Dynamic Routing         Yes           OSPFV2 Routing Process (RFC2328)         Yes           Multicast         Yes           Multicast Forwarding         Yes           IGMP Proxy Mode         Yes           IGMP Pr		
Multiple Routing Tables         Yes           Loopback Interfaces         Yes           Route Load Balancing (Equal-Cost Multipath)         Yes           Route Icad Balancing (Equal-Cost Multipath)         Yes           Route Monitoring Methods         ARP, ICMP Echo, Custom TCP Port, HTTP Request/Response           Source-Based Routing         Yes           Path MTU Discovery         Yes           Dynamic Routing         Yes           Policy-Based Dynamic Routes         Yes           OSPFv2 Routing Process (RFC328)         Yes           OSPFv2 Routing Tockes         Yes           OSPFv2 Routing Tockes         Yes           Multicast         Yes           Multicast Forwarding         Yes           IGMPv2 Compatibility Mode (RFC228)         Yes           IGMPv3 (RFC3376)         Yes           IGMP Proxy Mode         Yes           IGMP Shoop Mode         Yes           Policy-Based         Yes           Multicast Forwarding         Yes           IGMP Proxy	Scheduled Policy-Based Routing	Yes
Lopback Interfaces         Yes           Route Load Balancing (Equal-Cost Multipath)         Yes           Route Failover         Yes           Route Monitoring Methods         ARP, ICMP Echo, Custom TCP Port, HTTP Request/Response           Source-Based Routing         Yes           Path MTU Discovery         Yes           Dynamic Routing         Yes           Policy-Based Dynamic Routes         Yes           OSPF-v2 Routing Process (RFC2328)         Yes, multiple           OSPF-v2 Routing Process (RFC2328)         Yes           OSPF-v2 Over VPN         Yes           Multicast Forwarding         Yes           IGMP-v2 Compatibility Mode (RFC2236)         Yes           IGMP-v2 Compatibility Mode (RFC2236)         Yes           IGMP Proxy Mode         Yes	Virtual Routing	
Route Load Balancing (Equal-Cost Multipath)         Yes           Route Failover         Yes           Route Monitoring Methods         ARP, ICMP Echo, Custom TCP Port, HTTP Request/Response           Source-Based Routing         Yes           Path MTU Discovery         Yes           Dynamic Routing         Yes           Policy-Based Dynamic Routes         Yes           OSPF-V2 Routing Process (RFC2328)         Yes, multiple           OSPF-V2 Routing Process (RFC2328)         Yes, multiple           OSPF-V2 Routing Process (RFC2328)         Yes           Multicast         Yes           Multicast Forwarding         Yes           IGMP-V2 Compatibility Mode (RFC2336)         Yes           IGMP-V3 (RFC3376)         Yes           IGMP Proxy Mode         Yes           IGMP Proxy Mode         Yes           IGMP Proxy Mode         Yes           Policy-Based         Yes	Multiple Routing Tables	Yes
Route Kailover       Yes         Route Monitoring Methods       ARP, ICMP Echo, Custom TCP Port, HTTP Request/Response         Source-Based Routing       Yes         Path MTU Discovery       Yes         Dynamic Routing       Yes         Dynamic Routing       Yes         Policy-Based Dynamic Routes       Yes         OSFFv2 Routing Process (RFC2328)       Yes, multiple         OSFFv2 Routing Process (RFC2328)       Yes, multiple         OSFFv2 Routing Process (RFC2328)       Yes         Multicast       Yes         Multicast Forwarding       Yes         IGMPv2 Compatibility Mode (RFC236)       Yes         IGMPv3 (RFC3376)       Yes         IGMP Proxy Mode       Yes         IGMP Proxy Mode       Yes         IGMP Snoop Mode       Yes         Policy-Based       Yes         Multicast Forwarding       Yes         IGMP Proxy Mode       Yes         IGMP Proxy Mode       Yes         IGMP Proxy Mode       Yes	Loopback Interfaces	Yes
Route Monitoring Methods         ARP, ICMP Echo, Custom TCP Port, HTTP Request/Response           Source-Based Routing         Yes           Path MTU Discovery         Yes           Dynamic Routing         Yes           Policy-Based Dynamic Routes         Yes           OSPF-V2 Routing Process (RFC2328)         Yes, multiple           OSPF-V2 Routing Process (RFC2328)         Yes, multiple           OSPF-V2 Rec T683 Compatibility Mode         Yes           OSPF-V2 Over VPN         Yes           Multicast         Yes           Multicast Forwarding         Yes           IGMP-V2 Compatibility Mode (RFC2236)         Yes           IGMP-V2 Group Atbility Mode (RFC2236)         Yes           IGMP-V3 (RFC3376)         Yes           IGMP Proxy Mode         Yes           IGMP Proxy Mode         Yes           IGMP Proxy Mode         Yes           IGMP Snoop Mode         Yes           Policy-Based         Yes           MPLS Pass-through         Yes           Policy-Based         Yes           IAPP Pass-through of Non-IP Protocols         Yes           IAPP Pass-through of Non-IP Protocols         Yes           IApped Pass-through of Non-IP Protocols         Yes           IApped	Route Load Balancing (Equal-Cost Multipath)	Yes
Source-Based RoutingYesPath MTU DiscoveryYesDynamic RoutingYesPolicy-Based Dynamic RoutesYesOSPFV2 Routing Process (RFC2328)Yes, multipleOSPFV2 Routing Process (RFC2328)Yes, multipleOSPFV2 Routing Process (RFC2328)YesOSPFV2 Routing Process (RFC2328)YesOSPFV2 Routing Process (RFC2328)YesMulticastYesMulticast ForwardingYesMulticast ForwardingYesIGMPV2 Compatibility Mode (RFC2236)YesIGMPV3 (RFC3376)YesIGMPV3 (RFC3376)YesIGMP Proxy ModeYesIGMP Proxy ModeYesIGMP Shoop ModeYesPolicy-BasedYesPolicy-BasedYesPolicy-Based HounghYesIGMP Shoop ModeYesPolicy-BasedYesPolicy-BasedYesIGMP Shoop ModeYesPolicy-Based HounghYesPolicy-Based Houngh of Non-IP ProtocolsYesI Ager 2 Pass-through of Non-IP ProtocolsYesSpanning Tree BPDU RelayingNormal (STP), Rapid (RSTP), Multiple (MSTP), Per VLAN Spanning Tree PLUS (PVST+)IP Address AssignmentYes	Route Failover	Yes
Path MTU Discovery         Yes           Dynamic Routing            Policy-Based Dynamic Routes         Yes           OSPFV2 Routing Process (RFC2328)         Yes, multiple           OSPFV2 Routing Process (RFC2328)         Yes, multiple           OSPFV2 Routing Process (RFC2328)         Yes           OSPFV2 Routing Process (RFC2328)         Yes           OSPFV2 over VPN         Yes           Multicast         Yes           Multicast Forwarding         Yes           IGMPV3 (RFC3376)         Yes           IGMP Vox (RFC3376)         Yes           IGMP Proxy Mode         Yes           IGMP Proxy Mode         Yes           IGMP Shoop Mode         Yes           Policy-Based         Yes           MULS Pass-through         Yes           Policy-Based         Yes           MPLS Pass-through of Non-IP Protocols         Yes           DHCP Pass-through of Non-IP Protocols         Yes           Igar 2 Pass-through of Non-IP Protocols         Yes           Spanning Tree BPDU Relaying         Normal (STP), Rapid (RSTP), Multiple (MSTP), Per VLAN Spanning Tree Plus (PVST+)	Route Monitoring Methods	ARP, ICMP Echo, Custom TCP Port, HTTP Request/Response
Dynamic RoutingImage: constraint of the section of the s	Source-Based Routing	Yes
Policy-Based Dynamic RoutesYesOSPFv2 Routing Process (RFC2328)Yes, multipleOSPFv2 RFC1583 Compatibility ModeYesOSPFv2 over VPNYesMulticastYesMulticast ForwardingYesIGMPv2 Compatibility Mode (RFC2236)YesIGMPv3 (RFC3376)YesIGMP Proxy ModeYesIGMP Shoop ModeYesIGMP Shoop ModeYesTarsparent Mode (L2 Bridge Mode)YesPolicy-BasedYesDHCP Pass-throughYesDHCP Pass-through for Non-IP ProtocolsYesSpanning Tree BPDU RelayingNormal (STP), Rapid (RSTP), Multiple (MSTP), Per VLAN Spanning Tree Plus (PVST+)	Path MTU Discovery	Yes
Policy-Based Dynamic RoutesYesOSPFv2 Routing Process (RFC2328)Yes, multipleOSPFv2 RFC1583 Compatibility ModeYesOSPFv2 over VPNYesMulticastYesMulticast ForwardingYesIGMPv2 Compatibility Mode (RFC2236)YesIGMPv3 (RFC3376)YesIGMP Proxy ModeYesIGMP Shoop ModeYesIGMP Shoop ModeYesTarsparent Mode (L2 Bridge Mode)YesPolicy-BasedYesDHCP Pass-throughYesDHCP Pass-through for Non-IP ProtocolsYesSpanning Tree BPDU RelayingNormal (STP), Rapid (RSTP), Multiple (MSTP), Per VLAN Spanning Tree Plus (PVST+)	Dynamic Routing	
OSPFv2 Routing Process (RFC2328)Yes, multipleOSPFv2 RFC1583 Compatibility ModeYesOSPFv2 over VPNYesMulticastYesMulticast ForwardingYesIGMPv2 Compatibility Mode (RFC2236)YesIGMPv3 (RFC3376)YesIGMP Proxy ModeYesIGMP Shoop ModeYes <td></td> <td>Yes</td>		Yes
OSPFv2 RFC1S3 Compatibility ModeYesOSPFv2 over VPNYesMulticastYesMulticast ForwardingMulticast ForwardingYesIGMPv2 Compatibility Mode (RFC2236)YesIGMPv3 (RFC3376)YesIGMP Proxy ModeYesIGMP Snoop ModeYesIGMP Snoop ModeYesPolicy-BasedYesMULS Pass-throughYesDHCP Pass-through of Non-IP ProtocolsYesIganning Tree BPDU RelayingNormal (STP), Rapid (RSTP), Multiple (MSTP), Per VLAN Spanning Tree Plus (PVST+)IP Address AssignmentImp Address Assignment		
OSPFv2 over VPNYesMulticastYesMulticast ForwardingGMulticast ForwardingYesIGMPv2 Compatibility Mode (RFC2236)YesIGMPv3 (RFC3376)YesIGMP Proxy ModeYesIGMP Snoop ModeYesIGMP Snoop ModeYesPolicy-BasedYesPolicy-BasedYesIDHCP Pass-throughYesILayer 2 Pass-through of Non-IP ProtocolsYesSpanning Tree BPDU RelayingNormal (STP), Rapid (RSTP), Multiple (MSTP), Per VLAN Spanning Tree Plus (PVST+)IP Address Assignment	- · · · · · · · · · · · · · · · · · · ·	
Multicast         Multicast           Multicast Forwarding         Yes           IGM Pv2 Compatibility Mode (RFC2236)         Yes           IGM Pv3 (RFC3376)         Yes           IGM P Proxy Mode         Yes           IGM P Proxy Mode         Yes           IGM P Snoop Mode         Yes           IGM P Snoop Mode         Yes           Policy-Based         Yes           Policy-Based         Yes           MPLS Pass-through         Yes           IAVP Pass-through of Non-IP Protocols         <		
Multicast ForwardingYesIGMPv2 Compatibility Mode (RFC2236)YesIGMPv3 (RFC3376)YesIGMP Proxy ModeYesIGMP Snoop ModeYesIGMP Snoop ModeYesTransparent Mode (L2 Bridge Mode)YesPolicy-BasedYesMPLS Pass-throughYesDHCP Pass-through of Non-IP ProtocolsYesSpanning Tree BPDU RelayingNormal (STP), Rapid (RSTP), Multiple (MSTP), Per VLAN Spanning Tree Plus (PVST+)IF Jet Set Set Set Set Set Set Set Set Set S		
IGMPv2 Compatibility Mode (RFC2236)YesIGMPv3 (RFC3376)YesIGMP Proxy ModeYesIGMP Shoop ModeYesIGMP Shoop ModeYesTransparent Mode (L2 Bridge Mode)YesPolicy-BasedYesPolicy-BasedYesMPLS Pass-throughYesDHCP Pass-through of Non-IP ProtocolsYesSpanning Tree BPDU RelayingNormal (STP), Rapid (RSTP), Multiple (MSTP), Per VLAN Spanning Tree Plus (PVST+)IP Address AssignmentImage: State St		Van
IGMPv3 (RFC3376)YesIGMP Proxy ModeYesIGMP Snoop ModeYesIGMP Snoop ModeYesTransparent Mode (L2 Bridge Mode)YesPolicy-BasedYesPolicy-BasedYesMPLS Pass-throughYesDHCP Pass-through of Non-IP ProtocolsYesSpanning Tree BPDU RelayingNormal (STP), Rapid (RSTP), Multiple (MSTP), Per VLAN Spanning Tree Plus (PVST+)IP Address Assignment		
IGMP Proxy ModeYesIGMP Snoop ModeYesIGMP Snoop ModeYesTransparent Mode (L2 Bridge Mode)YesPolicy-BasedYesMPLS Pass-throughYesDHCP Pass-through for Non-IP ProtocolsYesLayer 2 Pass-through of Non-IP ProtocolsYesSpanning Tree BPDU RelayingNormal (STP), Rapid (RSTP), Multiple (MSTP), Per VLAN Spanning Tree Plus (PVST+)IP Address AssignmentImage: Normal State		
IGMP Snoop Mode       Yes         Transparent Mode (L2 Bridge Mode)       Yes         Policy-Based       Yes         MPLS Pass-through       Yes         DHCP Pass-through of Non-IP Protocols       Yes         I Layer 2 Pass-through of Non-IP Protocols       Yes         Spanning Tree BPDU Relaying       Normal (STP), Rapid (RSTP), Multiple (MSTP), Per VLAN Spanning Tree Plus (PVST+)         IP Address Assignment       Image: Normal State		
Transparent Mode (L2 Bridge Mode)       Image: Comparison of the state of the stat		
Policy-Based     Yes       MPLS Pass-through     Yes       DHCP Pass-through of Non-IP Protocols     Yes       Layer 2 Pass-through of Non-IP Protocols     Yes       Spanning Tree BPDU Relaying     Normal (STP), Rapid (RSTP), Multiple (MSTP), Per VLAN Spanning Tree Plus (PVST+)       IP Address Assignment		Yes
MPLS Pass-through     Yes       DHCP Pass-through     Yes       Layer 2 Pass-through of Non-IP Protocols     Yes       Spanning Tree BPDU Relaying     Normal (STP), Rapid (RSTP), Multiple (MSTP), Per VLAN Spanning Tree Plus (PVST+)       IP Address Assignment		
DHCP Pass-through     Yes       Layer 2 Pass-through of Non-IP Protocols     Yes       Spanning Tree BPDU Relaying     Normal (STP), Rapid (RSTP), Multiple (MSTP), Per VLAN Spanning Tree Plus (PVST+)       IP Address Assignment	Policy-Based	Yes
Layer 2 Pass-through of Non-IP Protocols     Yes       Spanning Tree BPDU Relaying     Normal (STP), Rapid (RSTP), Multiple (MSTP), Per VLAN Spanning Tree Plus (PVST+)       IP Address Assignment     IP Address Assignment	MPLS Pass-through	Yes
Spanning Tree BPDU Relaying         Normal (STP), Rapid (RSTP), Multiple (MSTP), Per VLAN Spanning Tree Plus (PVST+)           IP Address Assignment         IP Address Assignment	DHCP Pass-through	Yes
IP Address Assignment	Layer 2 Pass-through of Non-IP Protocols	Yes
IP Address Assignment	Spanning Tree BPDU Relaying	Normal (STP), Rapid (RSTP), Multiple (MSTP), Per VLAN Spanning Tree Plus (PVST+)
reninendue Audress Assignment Yes	Per Interface Address Assignment	Yes
Static Yes	-	

Ethernet, VLAN, Link-Aggregation Ethernet, VLAN, Link-Aggregation Yes Yes Yes, multiple Yes, multiple Yes
Yes Yes, multiple Yes Yes, multiple
Yes, multiple Yes Yes, multiple
Yes Yes, multiple
Yes Yes, multiple
Yes, multiple
Tes
Yes
DynDNS.org, Dyns.cx, CJB.net, Peanut Hull
Yes
Yes
Yes
Yes / Yes / Yes
Yes
Yes
Yes
Yes
Yes
VLAN, IPsec
< 2,000
Yes
2,400
Yes
Yes
Yes
Audit, DROP, Bandwidth Management
Audit, DHOP, Bandwidth Management
Yes
Yes
Audit, DROP, Bandwidth Management
Yes
Yes
HTTP, HTTPS, FTP, SMTP, POP3, IMAP, TFTP, SIP, H.323, PPTP, TLS/SSL
Yes / Yes
Yes / Yes
32
Yes / Yes
Yes
Yes
Google, Yahoo, Bing
Yes
HTTP, HTTPS, FTP, SMTP, POP3, IMAP
Yes
Yes
Yes
Yes, up to 10 levels
Yes
ONTO DODO INAD
SMTP, POP3, IMAP
SMTP, POP3, IMAP Yes
Yes
Yes SMTP, POP3, IMAP

Strip Malicious Links	SMTP, POP3, IMAP		
Tag Subject and Headers			
Send to Quarantine E-mail Address	SMTP, POP3, IMAP SMTP		
E-mail Rate Limiting	SMIP SMTP		
File Integrity	GWIT		
Supported Protocols	HTTP, HTTPS, FTP, SMTP, POP3, IMAP		
File Type Whitelisting / Blacklisting	HTP, HTPS, FTP, SMTP, POP3, IMAP Yes / Yes		
File Extension and MIME Type Verification	Yes		
Application Layer Gateway	100		
HTTP / HTTPS (Content Security)	Yes		
TP (Content Security, NAT / SAT)	Yes		
TFTP (NAT / SAT)	Yes		
SIP (NAT / SAT)	Yes		
H.323 / H.323 Gatekeeper (NAT / SAT)	Yes		
SMTP (Content Security)	Yes		
POP3 (Content Security)	Yes		
MAP (Content Security)	Yes, using Email Control Profile		
SSL / TLS (Offloading)	Yes		
PPTP (Passthrough, NAT / SAT)	Yes		
Psec VPN			
nternet Key Exchange	IKEv1, IKEv2		
KEv1 Phase 1	Main Mode, Aggressive Mode		
KEv1 Phase 2	Quick Mode		
Psec Modes	Tunnel, Transport (IKEv1 only)		
KE Encryption	AES, 3DES, DES, Blowfish, Twofish, Cast-128		
Psec Encryption	AES, 3DES, DES, Blowfish, Twofish, Cast-128, NULL		
AES Key Size	128, 192, 256		
KE/IPsec Authentication	SHA-1, SHA-256, SHA-512, MD-5, AES-XCBC (IKEv2 only)		
Perfect Forward Secrecy (DH Groups)	1, 2, 5, 14, 15, 16, 17, 18		
KE Config Mode	Yes		
KE DSCP Assignment	Static		
Dead Peer Detection (DPD)	Yes		
Pre-Shared Keys (PSK)	Yes		
X.509 Certificates	Yes		
XAuth (IKEv1)	Yes, Client and Server		
EAP (IKEv2)	Yes, Server (RADIUS only)		
PKI Certificate Requests	PKCS#1, PKCS#3, PKCS#7, PKCS#10		
Self-Signed Certificates	Yes		
Certificate Authority Issued Certificates	Yes, VeriSign, Entrust etc.		
Certificate Revocation List (CRL) Protocols	LDAP, HTTP		
CRL Fail-Mode Behavior	Conditional, Enforced		
KE Identity	IP, FQDN, E-mail, X.500 Distinguished-Name		
Security Association Granularity	Net, Host, Port		
Replay Attack Prevention	Yes		
Policy-Based Routing	Yes		
/irtual Routing	Yes		
Roaming Client Tunnels	Yes		
NAT Traversal (NAT-T) Psec Dial-on-Demand	Yes		
Psec Tunnel Selection Through Redundant VPN Tunnels	Firewall Rule Set, Routing, Policy-Based Routing Yes		
Psec Passthrough	Yes		
SSL VPN	103		
FLS/SSL VPN	Yes		
Dne-Time Client Installation	Yes		
Browser Independent	Yes		
/PN Policy Selection Through	Firewall Rule Set, Routing and Policy-Based Routing		
Split Tunneling	Yes		
SSL VPN IP Provisioning	IP Pool, Static		
L2TP VPN			
_2TPv2 Client (LAC)	Yes		
_2TPv2 Server (LNS)	Yes		
_2TPv3 Client (LAC)	Yes		
_2TPv3 Server (LNS)	Yes		
_2TP over IPsec	Yes		

L2TP Tunnel Selection Through	Firewall Rule Set, Routing, Policy-Based Routing		
2TP Client Dial-on-Demand	Yes IP Pool, Static		
2TPv2 Server IP Provisioning			
Other Tunnels			
PPoE Client (RFC2516)	Yes		
Innumbered PPPoE	Yes		
PPoE Client Dial-on-Demand	Yes		
PTP Client (PAC)	Yes		
PPTP Client Dial-on-Demand	Yes		
PPTP Server (PNS)	Yes		
PTP Server IP Provisioning	IP Pool, Static		
/IPPE Encryption (PPTP/L2TP)	RC4-40, RC4-56, RC4-128		
Generic Router Encapsulation (RFC2784, RFC2890)	Yes		
Sin4 Tunneling (RFC4213)	Yes		
unnel Selection Through	Firewall Rule Set, Routing, Policy-Based Routing		
Jser Authentication			
ocal User Database	Yes, multiple		
RADIUS Authentication	Yes, multiple servers		
RADIUS Accounting	Yes, multiple servers		
DAP Authentication	Yes, multiple servers		
RADIUS Authentication Protocols	PAP, CHAP, MS-CHAPv1, MS-CHAPv2		
AUTH IKE/IPsec Authentication	Yes		
Neb-Based HTTP/HTTPS Authentication	Yes		
Configurable HTTP/HTTPS Front-End	Yes		
_2TP/PPTP/SSL VPN Authentication	Yes		
Single Sign-On			
Device-Based Authentication (MAC Address)	Yes		
ARP Authentication	Yes		
RADIUS Relay	Yes		
Active Directory Integration	Microsoft Windows Server 2003, 2008 R2, 2012		
Client-less Deployment	Yes		
Client Support	iOS, Android, Windows, OSX, Linux		
Security Management			
Centralized Management	Clavister InControl <sup>1</sup>		
Web User Interface (WebUI)	HTTP and HTTPS		
SSH / SCP Management	Yes / Yes		
Command Line Interface (CLI)	Yes		
Vanagement Authentication	Local User Database, RADIUS		
Remote Fail-Safe Configuration	Yes		
Local Console (RS-232)	Yes		
Traffic Simulation (CLI)	ICMP, TCP, UDP		
Scripting	CLI, WebUI		
Packet Capture (PCAP)	Yes		
System Upgrade	SSH / WebUI / Clavister InControl. From version 9.00.01 and later.		
System and Configuration Backup	SSH / WebUI / Clavister InControl		
	Yes		
SNTP Time Sync	Tes		
Monitoring			
Syslog	Yes, multiple servers		
Clavister Log	Yes, multiple servers		
Real-Time Log	WebUI, Clavister InControl		
Mail Alerting	Yes		
Log Settings per Policy	Yes		
_og Export via WebUI	Yes		
SNMPv2c Polling / SNMPv2c Traps	Yes / Yes		
Real-Time Monitor Alerts (Log Action)	Yes		
Real-Time Performance Monitoring	WebUI, Clavister InControl		
Hardware Key Metrics Monitoring	CPU Load, CPU Temperature, Voltage, Memory, Fan, etc.		
	e for Clavister firewalls. These monitoring plug-ins are either commercially available or via open source		
Pv6			
	Caro Protocolo, Discos O Douter		
Dy6 Doody Cortification	Core Protocols, Phase-2 Router		
,			
Neighbor Discovery	Yes		
IPv6 Ready Certification       Neighbor Discovery       Proxy Neighbor Discovery	Yes		
Neighbor Discovery			

Interfaces	Yes		
Ethernet Interfaces	Yes		
VLAN Interfaces (802.1q)	Yes		
Link Aggregation IEEE 802.1AX-2008 (Static/LACP)	Yes		
Static IPv6 Address Assignment	Yes		
IPv6 DHCP Client	Yes		
Firewall			
IP Policies	ALLOW, DROP and REJECT		
Stateful Firewall	Yes		
Ingress Filtering	Yes		
IPv6 Routing / Policy-Based Routing	Yes / Yes		
Functionality			
DHCPv6 Server	Yes		
Application Control	Yes		
High Availability			
Active Mode with Passive Backup	Yes		
Firewall Connection State Synchronization	Yes		
IKE / IPsec State Synchronization	Yes / Yes		
User and Accounting State Synchronization	Yes		
DHCP Server and Relayer State Synchronization	Yes		
Synchronization of Dynamic Routes	Yes		
IGMP State Synchronization	Yes		
Server Load Balancing (SLB) State Synchronization	Yes		
Configuration Synchronization	Yes		
Device Failure Detection	Yes		
Dead Link / Gateway / Interface Detection	Yes / Yes / Yes		
Average Failover Time	< 800 ms		
Specifications subject to change without further notice	CID: 9150-0040-24 (2016		

Specifications subject to change without further notice.

<sup>1</sup> See Clavister InControl datasheet for compatible versions.

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#### About Clavister

Clavister (NASDAQ: CLAV) is a leading security provider for fixed, mobile and virtual network environments. Its award-winning solutions give enterprises, cloud service providers and telecoms operators the highest levels of protection against threats, with unmatched reliability. Clavister's performance in the security sector was recognized with the Product Quality Leadership Award from Frost & Sullivan. The company was founded in Sweden in 1997, with its solutions available globally through its network of channel partners. To learn more, visit <u>www.clavister.com</u>.

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