

CLAVISTER®

PRODUCTS AND SOLUTIONS



Clavister Products and Solutions



We're pleased to welcome you to the latest edition of Clavister Products and Solutions. Here you will find information about us, our solutions and our current product range. We hope this will be an inspiration for you and help you to choose the Clavister solutions that best match your needs.

For a faster, simpler and more secure world,


Jim Carlsson, CEO Clavister

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About Clavister

Clavister delivers the security solutions required for market leaders to optimize their networks – today and tomorrow. Driven by a passion for innovative design, simplicity and extreme performance, we offer a portfolio of high performance network security products designed specifically for Cloud, Enterprise and Telecoms environments.

As a leading provider of mobile and network security solutions for cloud services providers, enterprise customers and telecoms operators, we design our products from the inside out. This not only results in the highest level of protection against ever changing network threats and malicious attacks, but also beautiful design too. Our products are designed for ease of use, ease of deployment and are easy to manage and maintain.

In conclusion, our solutions are based on:

- Innovative design
- Simplicity
- Extreme performance

We believe these criteria are the key to unlocking a new dimension in mobile and network security.

Clavister Worldwide

Founded in 1997, we have a long history of providing network security for some of the most mission-critical networks in the world.

For detailed information, please visit www.clavister.com/about-us/contact-us.



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Solutions Overview

New technologies like 4G/LTE are providing users of mobile devices, such as smartphones, tablets and netbooks with 10x the speeds of 2G and 3G networks, enabling voice, data and multimedia streaming as fast as 1Gbps and beyond. The enormous increase in data traffic has resulted in substantial need for more bandwidth and has generated more complex network security environments.

Our market is driven by three major trends: the mobile data explosion, the transition to cloud services and growing network security requirements. These trends correlate with our main three segments detailed below.

Cloud

Security remains the main challenge hindering adoption of cloud services. Gartner predicts that by 2016, 40 per cent of enterprises will make proof of independent security testing a precondition for using any type of cloud services.

It is vital that providers of cloud services have reliable security measures in place and implement the latest technologies to protect client data. Trusted security is now the most important differentiator for cloud vendors.

Enterprise

Today, the workplace is facing a new dimension of threats to the corporate network. Cyber terrorism continues to cost enterprises dearly; an increase in mobile and field workers means that corporate networks have never needed to be more secure; and the explosion in social networks means that businesses face the challenge of managing and controlling how employees access these sites on the corporate network.

Telecoms

According to analyst firm Gartner, the world had five billion mobile connections in 2010 and is expected to grow to 50 billion mobile connections by 2020.



Mobile telecoms operators are facing fierce competition with decreasing revenues, as well as the challenge of handling the increased data traffic that comes from the use of mobile devices for both business and personal use. The need to optimize mobile data offloading in a secure manner and invest in core security has never been more vital.

Solutions

For more information about our solutions, please visit www.clavister.com/solutions.

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Cloud Solutions

The Clavister Virtual Series covers a huge range of solutions; deployed as a virtual firewall for enterprises, a business driver for cloud providers and enables Service Providers to offer security services to customers. Highlights from these solutions are listed below:

Virtual Firewall

The challenge for today's cloud environment is that the virtualized servers in the data center are more or less open for attacks between different servers without any protection when deployed in the same cloud. This can lead to regulatory compliance issues, as well as potential privacy and data leakage.

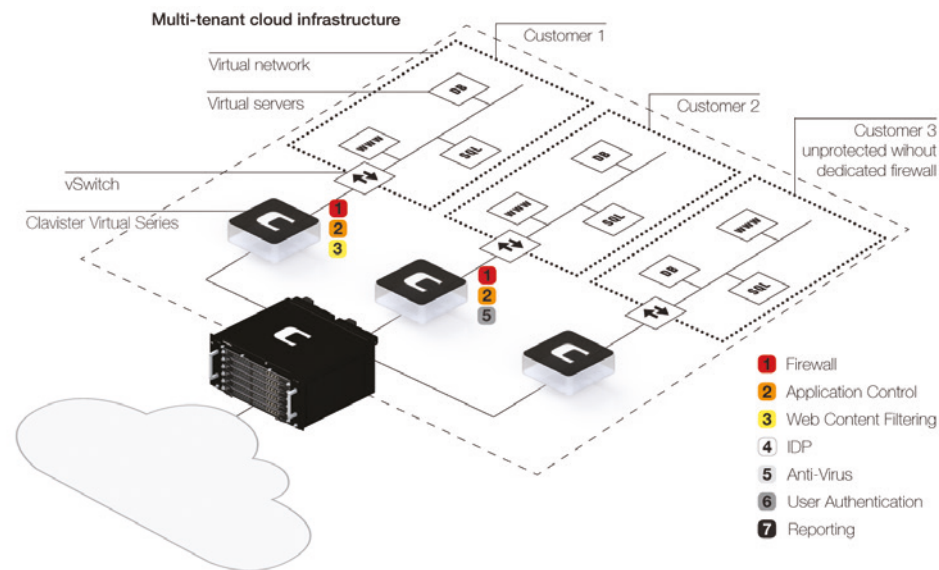
You can solve this by deploying Clavister Virtual Series in an enterprise-virtualized environment and establish protected zones in an otherwise open environment. This means that the virtual security gateway is used to establish security zones for different areas of the virtual network, each with different security classified information.

The Clavister Virtual Series can be used to establish protected zones for the HR, R&D, Sales and finance departments, but also for different functions, such as Web servers, database servers and ERP system – all in the same cloud environment. Each department can have their own firewall, which simplifies calculations on cost distribution within the enterprise.

Security-as-a-Service (SecaaS)

There are a number of security challenges facing those enterprises that want to move from a familiar, controlled in-house solution to an out-sourced, hosted multi-tenant cloud infrastructure. Hosting providers who cannot meet these challenges have a hard time attracting customers. Hosting providers that succumb to using their infrastructure firewalls to provision security policies for their customers are creating an administrative nightmare with a "shared" firewall. Customers are unwilling to pay for a service that is not tailored specifically for them.

By deploying Clavister Virtual Series, hosting providers can offer all customers their own dedicated security solution as value-added services and thereby generate new revenue streams. Customers benefit from greater control of their security policies without any administrative issues as each firewall is completely isolated and does not affect other customers' virtual deployments.



More cloud solutions are available at www.clavister.com/solutions/cloud.

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For more information about Clavister Cloud Solutions, please visit www.clavister.com/solutions/cloud.

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Enterprise Solutions

Distributed Enterprise Security

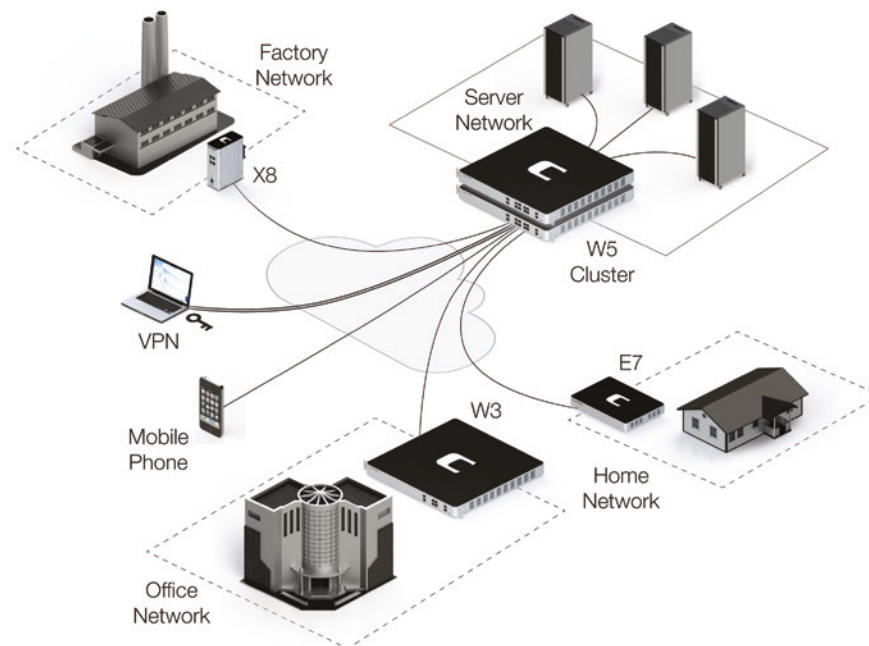
The main challenge for any enterprise is to create convenient and stable access to its headquarter resources for their branch offices and remote workers. It can be challenging to provide fast and uninterrupted connections across countries and continents. With an ever increasing number of cloud-based or internally hosted applications, social networks and an online culture introduces new security challenges for distributed enterprise networks. While employees need access to these services, they also expose the enterprise network to vulnerability threats. To protect their business, enterprises must make sure their network security solution can manage and control these services.

Clavister's versatile products are designed to deliver high performance in a distributed enterprise environment. The Clavister cOS Core is a modern, feature-rich network security operating system offering next-generation firewall features across all products, regardless of location and deployment. With excellent performance, world-class design and innovative functionality, the Clavister product portfolio delivers the performance, scalability and robustness required in a distributed enterprise environment.

For example, we deliver WAN optimization for remote and branch office by using more than one ISP. Load-balancing based on the characteristics of the traffic pattern and by using the connection with the best speed and lowest latency at any given time enables stable and secure connection to the organization's headquarters. Next-generation firewall services, such as Clavister True Application Control, Traffic Management and Web Content Filtering help prioritize business applications and restrict bandwidth for social media and leisure purposes.

With Clavister InControl, our comprehensive centralized management system, valuable IT resources can focus on daily tasks without unnecessary overhead. With fully centralized management, network analysis and reporting, Clavister InControl enables organizations to manage thousands of Clavister devices.

To ensure that your Clavister solution is always secure and fully operational, we have the all-inclusive Clavister Security Subscription. This subscription includes not only all software upgrades, all next-generation firewall services, such as Clavister True Application Control, Anti-Virus, Web Content Filtering and Intrusion Detection and Prevention, but also 24/7 support, hardware replacement and



our management systems, both Clavister InControl and Clavister Web Management. This gives an organization everything it needs to deliver fast, secure and uninterrupted security in a distributed enterprise environment. You can also choose just the Clavister Product Subscription that covers everything except the next-generation firewall services.

For example, a mobile worker uses a VPN client on his laptop or smartphone to connect to the organization's headquarters. The machines in the production facility are all controlled and managed by using the ruggedized Clavister X8, which is also connected to the headquarters using a VPN connection. The branch offices use Clavister W3 and Clavister W5; all connected securely to the headquarters. All Clavister products are centrally managed using Clavister InControl.

More enterprise solutions are available at www.clavister.com/solutions/enterprise.

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Telecoms Solutions

Data Offloading

With the introduction of smartphones and connected devices, data traffic has increased disproportionately putting operators in a position where infrastructure investments has become critical. Gartner predicts a growth from today's five billion connected devices to over 50 billion in less than a decade. Operators are now being forced to look for alternative ways to offload that surge in capacity demand.

The flat rate of data traffic independent of volume becomes a real issue as operators try to find ways to facilitate traffic growth at the lowest possible cost. However, this is a difficult scenario due to the lack of measuring parameters, making the consumer unsure what should be free and what should be paid for. Unlike 3G networks, Wi-Fi traditionally lacks security, guaranteed quality of service and seamless coverage, parameters which operators are used to implementing in their traditional 3G networks. There are several data offloading strategies, but below we concentrate on the integrated data offloading strategy.

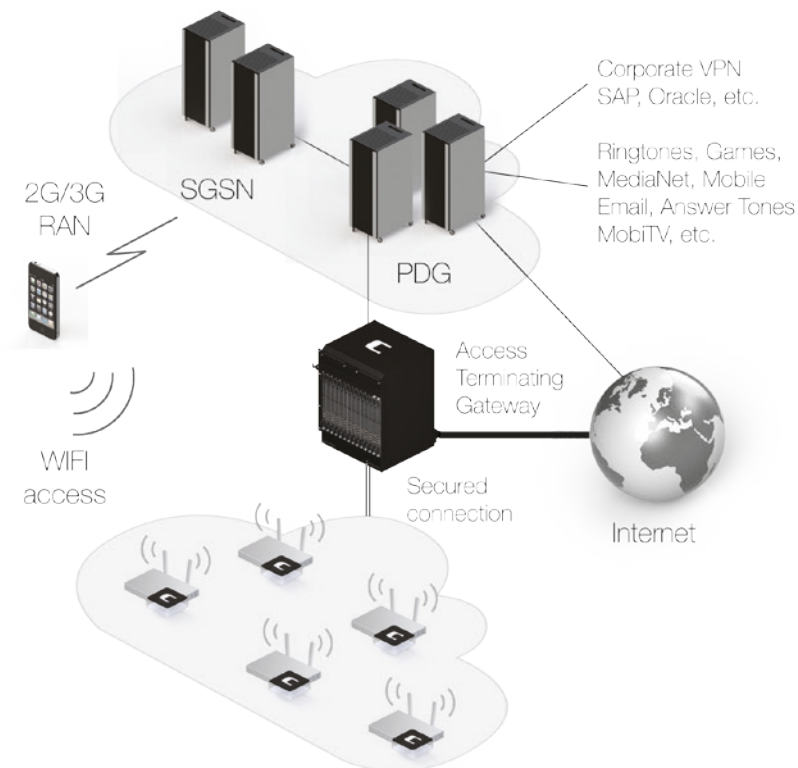
Integrated Data Offloading

This data offloading strategy is fully integrated with the operators core network and the consumer generally moves seamlessly between the core network and the Wi-Fi network without interruption. Operators opting for this strategy can promote carrier subscribed content, such as IP, TV, etc. to the consumer regardless, whether they are in the core network or in the Wi-Fi network.

The consumer is continuously secured, both in the core network and in the Wi-Fi network, thus preventing security breaches or tampering in the operators extended network.

The ability to integrate the Wi-Fi solution with the core network provides the operator with full management capability and a transparent billing process. Traditionally, this strategy also provides more content-based services, which generates more revenue. This strategy is required in many countries since it provides the necessary foundation for implementing Lawful Intercept (LI) since law enforcement policies are also subjected to Wi-Fi networks.

Regardless of which strategy operators are considering, using the Wi-Fi network for data offloading is the most adopted strategy for curbing the exploding data traffic growth.



More telecom solutions are available at www.clavister.com/solutions/telecom.

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Customer References

We have delivered network security solutions for over 15 years and have gained a reputation for flexible and powerful solutions that offer our customers world-class security functionality. We understand what matters to our customers across a variety of different business sectors.

Core Values

Some of the core values we bring to our customers are:

Innovative Design

- Not only do our products look great, our software is also designed to be clear and concise to help administrators get the job done with minimal difficulty.

Simplicity

- Everything we do contributes to making your job easier; from finding the right product, and ordering it to installing, configuring, deploying and operating it. We strive to make your life easier.

Extreme Performance

- The need for speed is vital in today's connected world. If your network is congested, your customers are going to complain. We deliver extreme performance.

Trusted Partner

Many of our customers have been with us over eight years and we have constantly delivered on our promises and helped our customers develop their businesses. With attractive upgrade paths, trade-in offers and attractive pricing, we have enabled our customers to reap the benefit of their initial investment in Clavister. We're also a trusted partner to our many OEM (original equipment manufacturer) partners. Our outstanding technology is powering D-Link, Radisys and many Ericsson installations around the world.



Flexibility

We not only provide flexibility when it comes to tailoring your security needs to your network infrastructure, we also integrate our products with minimal disruption to your business. We also offer flexibility in our product's growth. Most of our products are delivered as two versions; a standard version and a Pro version. Many customers start off with the standard version and upgrade to the Pro version when the business demands it. This flexible upgrade only requires a new licenses file, which means minimal downtime, no hardware replacements and longer production life for your investment.

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Our Customers

We have a large variety of customers using our products in a wide range of applications. Below is just a small selection of our customers in various segments.

Energy and Utility

<i>Customer</i>	<i>Country</i>
Gothenburg Energi	Sweden
E.ON Renewable Energy	Germany
Petro China	China
N-ERGIE	Germany

Research and Education

<i>Customer</i>	<i>Country</i>
ESTIA	France
TI-EDU	Switzerland
CASPUR	Italy
Södertörn University	Sweden

Service Providers

<i>Customer</i>	<i>Country</i>
Terremark	Belgium
DGC	Sweden
Defendo	Sweden
EPIserver	Sweden

Telecom Operators

<i>Customer</i>	<i>Country</i>
SoftBank	Japan
France Telecom	France
Rogers Wireless	Canada
Cincinnati Bell	USA

Financial Services

<i>Customer</i>	<i>Country</i>
Industrial Securities	China
Börsen AG	Germany
Bank of Xi'an	China
Carnegie	Sweden

Manufacturing

<i>Customer</i>	<i>Country</i>
Bodycote	Germany
SIT Group	Italy
Eldon Group	Sweden
Danieli	Italy

Healthcare

<i>Customer</i>	<i>Country</i>
Guangdong General Hospital	China
Region Skåne	Sweden

Facility Management

<i>Customer</i>	<i>Country</i>
Regus	UK
Tagerim	France
Newsec	Sweden

Media and Entertainment

<i>Customer</i>	<i>Country</i>
bwin	Sweden
Pilot Media	Germany
Tain Operations	Malta
Shanghai World Expo 2010	China

Transportation

<i>Customer</i>	<i>Country</i>
Beijing-Shanghai Express Railway	China
Chongqing Public Traffic	China
Nobina	Sweden
Eckerö Line Ferries	Åland

Government

<i>Customer</i>	<i>Country</i>
Civil Police, Federal District	Brazil
Gotland Kommun	Sweden
Göteborgs Trafikkontor	Sweden
Kammarkollegiet	Sweden

Retail

<i>Customer</i>	<i>Country</i>
Wittwer	Germany
DollarStore	Sweden

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For more information about Clavister customers, please download product collateral from www.clavister.com/support/resources/customer-spotlights.

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Clavister Technology

The main functionality available throughout our two operating systems, Clavister cOS Core and Clavister cOS Stream is described below:

Content Level Security

Clavister cOS Core provides support for Clavister True Application Control, Anti-Virus, Intrusion Detection and Prevention and Web Content Filtering. These security services give you a thorough defense against current threats. Most services are backed by our high-speed service network, the Clavister Service Provisioning Network (CSPN), which enables fast updates for signature and content.

Network Level Security

Firewalling, network user authentication and connectivity are central aspects to all Clavister products. With support for both IPv4 and IPv6, and firewall performance ranging from 200 Mbps to 1,120 Gbps, Clavister cOS is capable of delivering business value throughout all our main target segments. It also supports IPsec and SSL VPN connectivity to further extend your Clavister capabilities.

Network Infrastructure

Clavister products offer high availability and advanced routing concepts, such as static routing, policy-based routing, virtual routing, dynamic routing, multicast routing and transparent mode. This makes our products extremely suitable in highly diversified network environments. Clavister cOS Core also employs a highly efficient server-load balancing functionality for server farms, public Web servers or internal applications.

Management

For enterprise customers and hosting providers, the challenge of managing security in large installations requires an easy-to-use, centralized and scalable security management solution. Clavister InControl, our centralized security management solution, offers this and much more.



With advanced logging, built-in Software Development Kit (SDK) and the ability to service thousands of Clavister products, Clavister InControl is a key component in any enterprise solution.

For customers with only a single Clavister product, our highly acclaimed Clavister Web Management solution offers an easy to use way to manage it. Also included with all Clavister products is our efficient command-line interface (CLI), giving you full managerial access to all parameters.

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Clavister True Application Control

A closer look at Clavister True Application Control

Clavister True Application Control (AC) provides an effective way to identify and manage how applications are used in the network regardless of port and protocol used. Thanks to sophisticated protocol plug-ins and the unique engines inside Clavister AC and Clavister Deep Application Content Control (DACC) our products decode messages from more than 2,300 applications and extract more than 2,400 meta data tags. This translates into a future-proof solution with monitoring and control capabilities for millions of combinations of Web 2.0 applications, widgets, actions launched inside applications and similar.

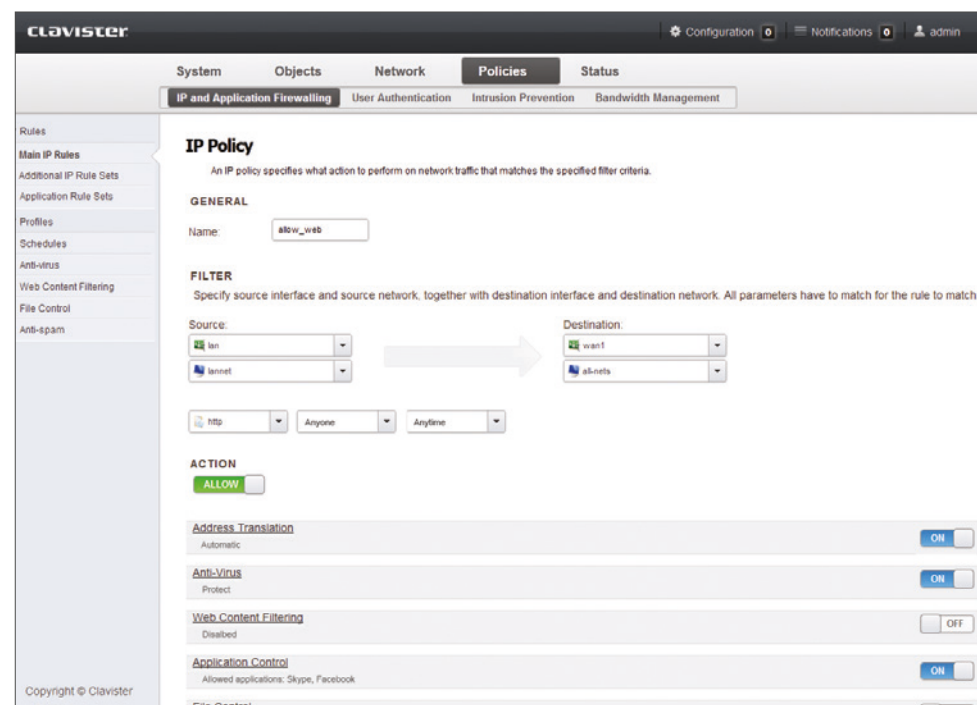
High performance recognition of encrypted applications

With Clavister SSL Inspection for Application Control you can even recognize applications that are encrypted (HTTPS). The tight integration of SSL Inspection for Application Control enables recognition of encrypted applications without any performance degradation or issues with certificate intrusions.

By identifying the encrypted applications without having to initiate a so called man-in-the-middle attack where all sessions has to be decrypted and re-encrypted the recognition can be done at very high speed but also avoid issues with invalid certificates. This, non intrusive approach, also enables recognition to work on thick applications where the certificate validation is done more rigid than in web-browser based applications.

Managing application control policies

Applying Clavister Application Control policies are as easy to define as regular level 3 policies. For layer 3 policies it is often easy to decide what port/protocol to allow or block but when it comes to applications it is sometimes a bit more complicated to understand what is productive and what is not, what applications may introduce risk and similar. To assist and simplify building proper application control policies the configuration interface has been designed as a Wiki style portal. The Wiki stye portal enables filtering and selection of applications based on Application-Family, Characteristics/Behavior descriptive Tags and Risk Rating. This approach helps you define poli-



cies that are effective and optimize your network for security and productivity without having to understand the exact behavior of every application that exists on the internet.

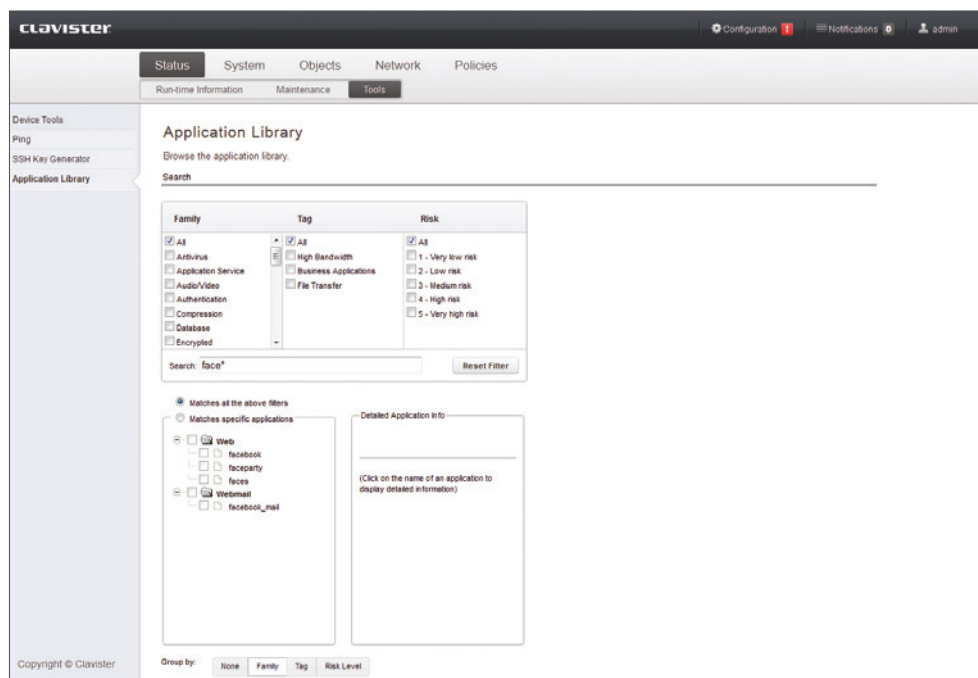
Flexible configuration to meet your business needs

To further enhance the usability of Clavister Application Control we have integrated it following the same super-flexible approach as with all other features. This means that it is easy to combine Application Control with User Awareness, Time Schedules, Interfaces, IP addresses and similar. Naturally you can apply actions such as allow / monitor, block or traffic shape on any policy you define. The flexible and powerful configuration makes it easy to tailor your policies to fit your specific business needs rather than having to compromise due to lack of configurability of your

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Clavister True Application Control



firewall. One of the strong points of Clavister application Control is the ability to monitor application usage in your network. Some applications can disturb the network traffic by using too much resource or they can attract malicious traffic patterns or viruses.

Monitor, analyze, take action

As an example, an administrator notices that there is an increase in traffic going back and forth between the Internet and the internal network. Before taking any steps to curb this, the administrator enables Clavister Application Control. Studying the log files reveals that the offending application is a BitTorrent application originating from an IP address on the internal network. This information enables the administrator to act accordingly, either by blocking or applying traffic

management to BitTorrent, but limit it to only 2 Mbps. For applications that have a tendency to starve network traffic resources, you can apply traffic management to these applications. This gives you the ability to allocate the right amount of resources without having network congestion caused by applications.

Logging and reporting

One of the key components in Clavister Application Control is the Clavister InControl Logging Agent (ILA) which is used for collecting application statistics. The statistics can then be processed, analyzed and presented in Clavister InControl using a wide range of display options, including online analytical processing (OLAP) functionality.

Clavister InControl enables you to view not only collected application control information, but all collected information, including IDP, AV and WCF information. This gives you a correlated view of collected information, which can be analyzed and distributed in various formats.

Using the associated meta data it is possible to refine policies for greater accuracy. For example, for generic HTTP traffic you can specify URL, user agent, Web server, cookies and more than 60 additional meta data tags.

Configuration

We have made Clavister True Application Control as easy and straight forward to configure as everything else in Clavister InControl. There is a tight integration between configuring Intrusion Detection and Prevention (IDP), Anti-Virus (AV) and Web-Content Filtering (WCF) and configuring Clavister True Application Control.

For more information about features and technologies, please visit the [Feature Spotlights](#) section on our Web.

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For more information about Clavister Application Control, please visit www.clavister.com/cos/content-level-security/application-control.

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Clavister Subscriptions

Smart and flexible licensing for your Clavister products

Clavister Subscriptions is our answer to the current trend of a bewildering array of subscriptions, services, options and choices that customers are faced with when deciding on a new network security solution. We offer you two options to give you the best fit between flexibility and choice. Choose between **Clavister Security Subscription** (CSS), which includes everything and is designed to take the guesswork out of the equation and give you everything you will ever need to run a successful network security solution. Or choose **Clavister Product Subscription** (CPS), which includes software updates, centralized management support, 24/7 technical support and hardware replacement. Each of these subscriptions are available in 12, 24, 36, 48 or 60 months service plans. Flexible and smart, just choose coverage and length.

Buying a network security solution from Clavister is more than just taking delivery of the product. Clavister Subscriptions will maximize your investment and offer you years of trouble-free operations.

Content Security Services

Clavister Security Subscription comes with support for Clavister next-generation firewall products services, such as Clavister True Application Control, Intrusion Detection and Prevention (IDP), Web Content Filtering and Anti-Virus.

Common Services

Clavister Subscriptions includes a large number of common services, such as access to major, minor and maintenance releases, a number of hardware-related services, including standard hardware support, RMA warranty and hardware replacement service, as well as 24/7 technical support.

The table to the right show the included servivces in the two subscription offerings; Clavister Security Subscription and Clavister Product Subscription.



	<i>Security Subscription</i>	<i>Product Subscription</i>
Software Updates	Yes	Yes
Content Security (AC, IDP, WCF and AV)	Yes	No
Centralized Management Support	Yes	Yes
24/7 Technical Support	Yes	Yes
Hardware Replacement Service	Yes	Yes
Flexible Service Plans (months)	12, 24,36, 48 and 60	12, 24,36, 48 and 60

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Detailed Subscription Comparison

Clavister Security Subscription Specifications	Virtual	Eagle	Lynx	Wolf	PolarBear
<i>Product Services</i>					
Clavister True Application Control	√	√	√	√	√
Intrusion Detection and Prevention (IDP)	√	√	√	√	–
Anti-Virus Protection	√	√	√	√	–
Web Content Filtering (WCF)	√	√	√	√	–
Clavister InControl – centralized management	√	√	√	√	–
<i>Software Updates</i>					
Major, Minor and Maintenance Releases	√	√	√	√	√
<i>Hardware Services</i>					
Standard hardware warranty	n/a	√	√	√	√
Return material authorization (RMA) warranty	n/a	√	√	√	√
Hardware replacement service	n/a	√	√	√	√
<i>Technical Support</i>					
24/7 technical support	√	√	√	√	√

Clavister Product Subscription Specifications	Virtual	Eagle	Lynx	Wolf	PolarBear
<i>Product Services</i>					
Clavister InControl – centralized management	√	√	√	√	–
<i>Software Updates</i>					
Major, Minor and Maintenance Releases	√	√	√	√	√
<i>Hardware Services</i>					
Standard hardware warranty	n/a	√	√	√	√
Return material authorization (RMA) warranty	n/a	√	√	√	√
Hardware replacement service	n/a	√	√	√	√
<i>Technical Support</i>					
24/7 technical support	√	√	√	√	√

Specifications subject to change without further notice.

NOTE: A valid Clavister Subscription is a mandatory service. Your Clavister product will not function without it.

For more information about Clavister Subscriptions, visit www.clavister.com/support/clavister-subscriptions.

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Clavister Product Portfolio

Innovative Design, Simplicity and Extreme Performance

In response to the requirements of today's connected business, our new portfolio of high performance mobile and network security products are designed to meet these specific needs.

Our new product portfolio is based around our two new operating systems, the **Clavister cOS Core** and **Clavister cOS Stream**. They have been carefully designed to provide extreme performance with special care on optimization for their respective target segments. They both share key network security functionality, but whereas Clavister cOS Stream is optimized for telecoms operators targeting data offloading and core security in 4G/LTE networks, Clavister cOS Core is optimized for enterprise and cloud solutions.

Key Highlights

- Our innovative, sleek product design combats the very latest security and operational challenges facing today's organizations, and offers next generation firewalls, multi-functional security and fully centralized management – all in one space-efficient device.
- Clavister True Application Control is one of several network security services available in Clavister cOS Core and it allows organizations to identify and control the use of over 1,000 applications, such as Facebook, Skype and YouTube. Other network security services are Anti-Virus, Intrusion Detection and Prevention (IDP) and Web Content Filtering.
- Clavister InControl, our centralized management system, enables the management of thousands of devices from the same management system and can be shared by as many administrators as needed.
- Clavister's products and solutions offer network security for the most demanding environments and can monitor network traffic, protect critical business assets, block undesirable surfing, protect against intrusion, viruses, worms, Trojans and denial-of-service attacks.



Portfolio

This section presents our product portfolio in more detail.

- Clavister Virtual Series – Designed for virtual and cloud environments
- Clavister Eagle Series – Products for remote and branch offices
- Clavister Lynx Series – Industrial and ruggedized products
- Clavister Wolf Series – Products for enterprise and data centers
- Clavister PolarBear Series – Telecom and carrier-grade products

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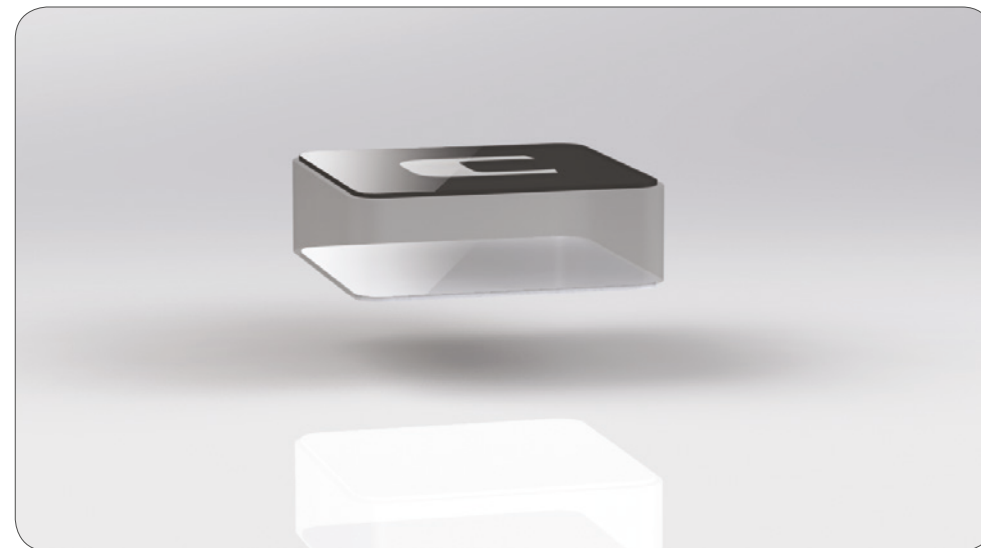
Clavister Virtual Core Series

Clavister Virtual Core Series – excellent performance, feature-rich and efficient

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 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 Series in market-leading VMware or KVM virtualization environments. Its minimal footprint and extremely low resource requirements makes the Clavister Virtual Series an optimal solution for all types of virtual and cloud-based network security solutions.

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
- Security management is always included: centralized security management, Web-based management and command-line interface (CLI) are all included with Clavister Subscriptions
- 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. Easy to use, deploy and manage.



Clavister Virtual Core Series Specifications

	V2	V3	V5	V7	V9	V10
Firewall Performance (Mbps)	300	1,000	2,000	3,000	6,000	10,000
IPsec VPN Performance (Mbps)	150	500	1,000	2,000	3,000	5,000
Concurrent Connections	16,000	64,000	128,000	250,000	512,000	2,000,000
Concurrent IPsec VPN Tunnels	25	500	1,000	1,500	3,000	5,000
Ethernet Interfaces	Up to 3	Up to 4	Up to 6	Up to 8	Up to 10	Up to 10
VLAN Interfaces (802.1q)	8	32	256	512	1,024	2,048
Routing Tables (Virtual Routers)	5	25	50	100	200	1,000
Maximum Number of Users	Unrestricted					
Supported Virtual Platforms	VMware ESXi, KVM					
Clavister OS	Clavister cOS Core					
Form Factor	Software					

RESOURCES

For more detailed specifications on Clavister Virtual Series, download the product brochure from www.clavister.com/products/virtual-series/clavister-virtual.

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Clavister E5

Clavister Eagle Series – feature-rich, entry-level firewall, robust functionality

The Clavister E5 is a set of beautifully designed next-generation security appliances, built to deliver comprehensive and powerful enterprise-grade firewall services for small branch offices, remote locations and to use as customer premise equipment (CPE). The Clavister E5 is perfectly suited for solutions where multiple firewalls are deployed, often over geographically dispersed areas, and where there is a strong need for a centralized managed, scalable network security solution.

FEATURES AT-A-GLANCE

- Cost-effective next-generation firewall for any organization, housed in a convenient desktop form-factor
- Next-generation firewall services, including Clavister True Application Control, Clavister Content Security Services and User Identity Awareness
- 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
- Security management is always included: centralized security management, Web-based management and command-line interface (CLI) are all included with Clavister Subscriptions
- 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 solution for small office, branch offices and customer premise equipment (CPE) solutions



Clavister E5 Specifications

	E5	E5 Pro
Firewall Performance (Mbps)	125	250
IPsec VPN Performance (Mbps)	50	100
Concurrent Connections	5,000	10,000
Concurrent IPsec VPN Tunnels	50	100
Ethernet Interfaces	5 x 1GbE (RJ45) switch block + 2 x 1GbE (RJ45)	
Management/HA Interfaces	Yes, any Ethernet interface can be configured for Management/HA	
VLAN Interfaces (802.1q)	16	32
Routing Tables (Virtual Routers)	3	5
Clavister OS	Clavister cOS Core	
Form Factor	Desktop (rack mount kit included)	

RESOURCES

For more detailed specifications on Clavister E5, download the product brochure from www.clavister.com/products/eagle-series/clavister-e5.

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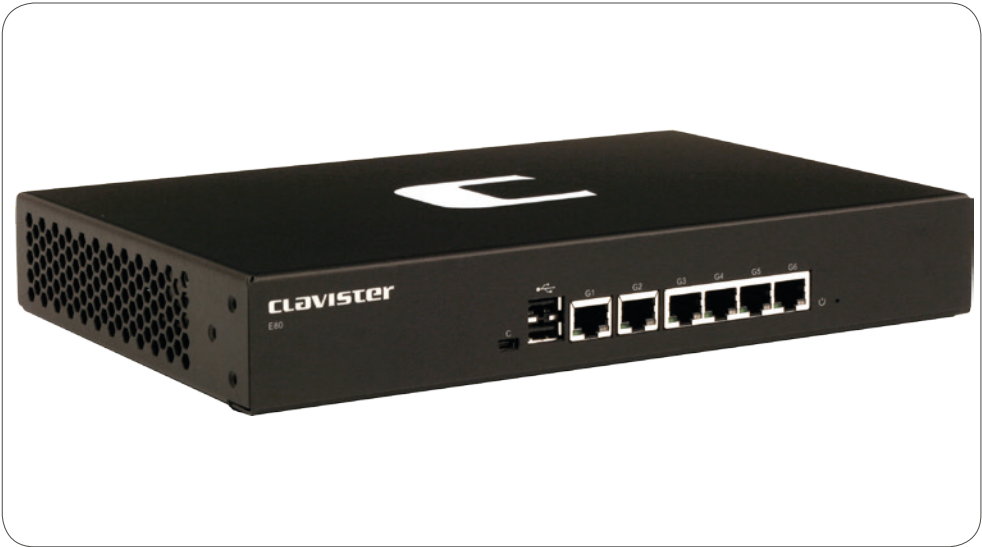
Clavister E80

Clavister Eagle Series – feature-rich, entry-level firewall, robust functionality

The Clavister E80 is a set of next-generation security appliances, built to deliver comprehensive and powerful enterprise-grade firewall services for small branch offices, remote locations and as customer premise equipment (CPE). The Clavister E80 is perfectly suited for solutions where multiple firewalls are deployed, often over geographically dispersed areas, and where there is a strong need for a centralized managed, scalable network security solution.

FEATURES AT-A-GLANCE

- Cost-effective next-generation firewall for any organization, housed in a convenient desktop form-factor
- Next-generation firewall services, including Clavister True Application Control, Clavister Content Security Services and User Identity Awareness
- 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
- Central 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 solution for small office, branch offices and customer premise equipment (CPE) solutions



Clavister E80 Specifications

	E80	E80 Pro
Firewall Performance (Gbps)	2	4
IPsec VPN Performance (Mbps)	100	200
Concurrent Connections	250,000	500,000
Concurrent IPsec VPN Tunnels	100	200
Ethernet Interfaces	6 x 1GbE (RJ45)	
Management/HA Interfaces	Yes, any Ethernet interface can be configured for Management/HA	
VLAN Interfaces (802.1q)	64	128
Routing Tables (Virtual Routers)	5	10
Clavister OS	Clavister cOS Core	
Form Factor	Desktop	

RESOURCES

For more detailed specifications on Clavister E80, download the product brochure from www.clavister.com/products/eagle-series/clavister-E80.

Clavister X8

Clavister Lynx Series – rugged and durable, with outstanding performance

The Clavister X8 is targeted for installations where standard security products cannot function reliably. With its industrial, rugged design, the durable Clavister X8 can withstand harsh, industrial environments and deliver outstanding solid performance, offering unified security management between office environment and industry environment. The Clavister X8 is perfect for tough environments, such as remote industrial locations and other demanding environments where high-end security is required.

FEATURES AT-A-GLANCE

- Cost-effective next-generation firewall for harsh environments, housed in an industrial rugged design form-factor (DIN mount included)
- Next-generation firewall services, including Clavister True Application Control, Clavister Content Security Services and User Identity Awareness
- 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
- Security management is always included: centralized security management, Web-based management and command-line interface (CLI) are all included with Clavister Subscriptions
- 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 industrial environments, offshore installations and other demanding environments



Clavister X8 Specifications

	X8	X8 Pro
Firewall Performance (Mbps)	1,000	2,000
IPsec VPN Performance (Mbps)	70	140
Concurrent Connections	100,000	200,000
Concurrent IPsec VPN Tunnels	100	250
Ethernet Interfaces	4 x 1GbE (RJ45)	
Management/HA Interfaces	Yes, any Ethernet interface can be configured for Management/HA	
VLAN Interfaces (802.1q)	128	256
Routing Tables (Virtual Routers)	5	10
Clavister OS	Clavister cOS Core	
Form Factor	Industrial DIN-mount	

RESOURCES

For more detailed specifications on Clavister X8, download the product brochure from www.clavister.com/products/lynx-series/clavister-x8.

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Clavister W20

Next-generation firewall with excellent scalability, performance and functionality

The Clavister W20 is a set of beautifully designed next-generation security appliances, targeted towards remote/branch offices and as entry-level enterprise security gateways. The Clavister W20 delivers next-generation firewall security at a break-through price point, offering advanced routing flexibility and comprehensive features without compromising security.

The Clavister W20 is an ideal solution for any organization that need premium network security in a cost-effective package.

FEATURES AT-A-GLANCE

- Cost-effective next-generation firewall for larger remote/branch office or for entry-level enterprise solutions, housed in a sleek 1U 19" rack appliance, delivering up to 6 Gbps of firewall performance (plaintext throughput)
- Next-generation firewall services, including Clavister True Application Control, Clavister Content Security Services and User Identity Awareness
- 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
- Central 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 solution for remote offices, branch offices and entry-level enterprises



Clavister W20 Specifications

	W20	W20 Pro
Firewall Performance (Mbps)	4,000	6,000
IPsec VPN Performance (Mbps)	250	300
Concurrent Connections	500,000	750,000
Concurrent IPsec VPN Tunnels	500	1,000
Ethernet Interfaces	6 x 1GbE (RJ45)	
Management/HA Interfaces	Yes, any Ethernet interface can be configured for Management/HA	
VLAN Interfaces (802.1q)	256	512
Routing Tables (Virtual Routers)	25	50
Clavister OS	Clavister cOS Core	
Form Factor	19" Rack Mountable (1U)	

RESOURCES

For more detailed specifications on Clavister W20, download the product brochure from www.clavister.com/products/wolf-series/clavister-w20.

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Clavister W30

Powerful next-generation firewall with excellent scalability, performance and expandability

The Clavister W30 is a powerful and flexible next-generation security appliances, targeted towards remote/branch offices and smaller data centers. The Clavister W30 delivers next-generation firewall security at an attractive price point, offering flexible and future-safe expansion options. With the Expansion Slot, you have the option to add an interface module with the choice of either 8 x 1GbE (RJ45), 8 x 1GbE (SFP) or 2 x 10GbE (SFP+). This gives you a future-proof next-generation firewall that will grow and expand with your organization.

The Clavister W30 is the perfect solution for any organization that need a powerful, flexible and expandable network security solution, at an attractive price point.

FEATURES AT-A-GLANCE

- Cost-effective next-generation firewall for larger remote/branch office or for smaller data centers solutions, housed in a sleek 1U 19" rack appliance, delivering up 8 Gbps of firewall performance (plaintext throughput)
- Future-proof with new Expansion Slot for added connectivity
- Next-generation firewall services, including Clavister True Application Control, Clavister Content Security Services and User Identity Awareness
- 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
- Security management is always included: centralized security management, Web-based management and command-line interface (CLI) are all included with Clavister Subscriptions
- 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 and expandable solution for remote/branch offices and smaller data centers



Clavister W30 Specifications

	W30	W30 Pro
Firewall Performance (Mbps)	6,000	8,000
IPsec VPN Performance (Mbps)	250	300
Concurrent Connections	750,000	1,000,000
Concurrent IPsec VPN Tunnels	1,000	2,000
Ethernet Interfaces	6 x 1GbE (RJ45)	
Expansion Slot	Yes, one (1) module, supports 8 x 1GbE (RJ45 or SFP) or 2 x 10GbE (SFP+)	
Management/HA Interfaces	Yes, any Ethernet interface can be configured for Management/HA	
VLAN Interfaces (802.1q)	1,024	2,048
Routing Tables (Virtual Routers)	50	100
Clavister OS	Clavister cOS Core	
Form Factor	19" Rack Mountable (1U)	

RESOURCES

For more detailed specifications on Clavister W30, download the product brochure from www.clavister.com/products/wolf-series/clavister-w30.

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Clavister W3

Clavister Wolf Series – high performance, excellent scalability and robust functionality

The Clavister W3 is a set of beautifully designed next-generation security appliances, targeted towards larger remote/branch offices and as entry-level enterprise security gateways. The Clavister W3 delivers next-generation firewall security at a break-through price point, offering advanced routing flexibility and comprehensive features without compromising security.

The Clavister W3 is an ideal solution for any organization that need premium network security in a cost-effective package.

FEATURES AT-A-GLANCE

- Cost-effective next-generation firewall for larger remote/branch office or for entry-level enterprise solutions, housed in a sleek 1U 19" rack appliance, delivering up to 8 Gbps of firewall performance (plaintext throughput)
- Next-generation firewall services, including Clavister True Application Control, Clavister Content Security Services and User Identity Awareness
- 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
- Security management is always included: centralized security management, Web-based management and command-line interface (CLI) are all included with Clavister Subscriptions
- 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 solution for remote offices, branch offices and entry-level enterprises



Clavister W3 Specifications

	W3	W3 Pro
Firewall Performance (Mbps)	4,000	8,000
IPsec VPN Performance (Mbps)	250	500
Concurrent Connections	500,000	1,000,000
Concurrent IPsec VPN Tunnels	500	1,000
Ethernet Interfaces	8 x 1GbE (RJ45)	
Management/HA Interfaces	Yes, any Ethernet interface can be configured for Management/HA	
VLAN Interfaces (802.1q)	256	512
Routing Tables (Virtual Routers)	10	25
Clavister OS	Clavister cOS Core	
Form Factor	19" Rack Mountable (1U)	

RESOURCES

For more detailed specifications on Clavister W3, download the product brochure from www.clavister.com/products/wolf-series/clavister-w3.

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Clavister W5

Clavister Wolf Series – high performance, excellent scalability and robust functionality

The Clavister W5 is the perfect security solution for large headquarters or as a main enterprise firewall. The Clavister W5 delivers stunning performance, up to 16 Gbps of true next-generation firewall security in a single 1U 19" rack mount. With dedicated management and high-availability ports, the Clavister W5 is the easiest network security solution when you need to make a bullet-proof, clustered solution.

This makes the Clavister W5 an ideal solution for organizations that need premium network security.

FEATURES AT-A-GLANCE

- Cost-effective next-generation firewall for main headquarters, data centers and large enterprises
- Up to 20 Gbps of true next-generation firewall security housed in a sleek 1U 19" rack appliance
- Next-generation firewall services, including Clavister True Application Control, Clavister Content Security Services and User Identity Awareness
- 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
- Security management is always included: centralized security management, Web-based management and command-line interface (CLI) are all included with Clavister Subscriptions
- 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 solution for main offices, data centers and large enterprise solutions



Clavister W5 Specifications

	W5	W5 Pro
Firewall Performance (Mbps)	10,000	20,000
IPsec VPN Performance (Mbps)	1,500	3,000
Concurrent Connections	2,500,000	5,000,000
Concurrent IPsec VPN Tunnels	2,500	5,000
Ethernet Interfaces	2 x 10GbE (SFP+), 4 x 1GbE (SFP), 6 x 1GbE (RJ45)	
Management/HA Interfaces	Yes, any Ethernet interface can be configured for Management/HA	
VLAN Interfaces (802.1q)	512	1,024
Routing Tables (Virtual Routers)	100	250
Clavister OS	Clavister cOS Core	
Form Factor	19" Rack Mountable (1U)	

RESOURCES

For more detailed specifications on Clavister W5, download the product brochure from www.clavister.com/products/wolf-series/clavister-w5.

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CLAVISTER
PolarBearSeries

Clavister P9 Blade

Clavister PolarBear Series – robust ATCA design, uncompromising performance

The Clavister P9 Blades together with the Clavister P9 Chassis offers the highest level of redundancy, scalability and performance possible. With capacity up to 1,120 Gbps, the AdvancedTCA-based chassis is capable of delivering the required processing power that telecoms operators and large-scale data centers require.

The Clavister P9 Blades offers uncompromising power and performance. Organizations are able to keep adding as many Clavister P9 Blades as they can fit in a single Clavister P9 Chassis. The Clavister P9 Chassis offers the highest level of redundancy, scalability and performance possible.

Key Features

- Clavister True Application Control
- Massive firewall performance
- Comprehensive connectivity
- Flexible configurations

Key Benefits

- Powerful processing blades
- Robust and reliable
- Extensible and powerful



Clavister P9 Blade Specifications

	P9 Blade	P9 Blade Pro
Firewall Performance (Gbps)	40	80
IPsec VPN Performance (Gbps)	28	56
Concurrent Connections	10,000,000	20,000,000
Concurrent IPsec VPN Tunnels	100,000	200,000
Ethernet Interfaces	4 x 10GbE (SFP+) – Front Panel 12 x 10GbE (SFP+) – RTM Module, for data plane connectivity	
VLAN Interfaces (802.1q)	1,024	2,048
Routing Tables (Virtual Routers)	250	500
Clavister OS	Clavister cOS Stream	
Form Factor	8U x 6HP x 280mm ATCA blade PICMG 3.0, PICMG 3.1 Option 9 Revision 2.0	

RESOURCES

For more detailed specifications on Clavister P9 Blade, download the product data sheet from www.clavister.com/products/polarbear-series/clavister-p9-blade.



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Clavister P9 Chassis

Clavister PolarBear Series – robust ATCA design, uncompromising performance

The Clavister P9 Chassis offers the highest level of redundancy, scalability and performance possible. With capacity up to 1,120 Gbps, using Clavister P9 Blades Pro, the AdvancedTCA-based chassis is capable of delivering the required processing power that telecom operators and large-scale data centers require.

Key Features

- Massive firewall performance
- Comprehensive connectivity
- Robust and reliable
- Extensible and powerful



Clavister P9 Chassis Specifications

	P9 SYS6002	P9 SYS6006	P9 SYS6014	P9 SYS6016
Firewall Performance (Gbps)*	160	320	960	1,120
VPN Performance (Gbps)*	112	224	672	784
Compliance	PICMG 3.0, Rev. 2.0 ATCA Base Specification		PICMG 3.0/3.1, Rev. 2.0 ATCA Base Specification	
ATCA Blade Slots	2	4	12	14
Switch Blade Slots	n/a	2	2	2
Cooling Fans	2	2 (removable)	2 front (removable), 2 back (removable)	2 front (removable), 2 back (removable)
Required Clavister OS	Clavister cOS Stream 1.40.01			
Form Factor	2U 19" ATCA rack-mount	6U 19" ATCA rack-mount	13U 19" ATCA rack-mount	13U 23" ATCA rack-mount 13U ETSI 515 rack mount (optional)

* Performance reflect fully populated chassis with Clavister P9 Blades Pro.

RESOURCES

For more detailed specifications on Clavister P9 Chassis, download the product data sheet from www.clavister.com/products/polarbear-series/clavister-p9-chassis.

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In conclusion...

We hope this information has inspired you and taught you more about Clavister and what we and our products can do for you and your business. After all, we are here to help resolve your security challenges.

Important Clavister Links

Clavister Solutions

Learn more about our solutions.

www.clavister.com/solutions

Clavister Products

Learn more about our products.

www.clavister.com/products

Clavister Resources

Get access to product data sheets, customer spotlights and media related material.

www.clavister.com/support/resources

Clavister Training

View our available training courses, both online and on-site, to learn more about how to manage your Clavister products.

www.clavister.com/training

My Clavister

Log in and manage your Clavister account, your licenses and your help desk tickets (account required).

www.clavister.com/my-clavister

Contacting us

We would like to hear from you, so please visit www.clavister.com/contact and let us know your thoughts and ideas on the next dimension on network security.



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