Scalable high-performance application delivery

Kemp ECS Connection Manager offers the scalability, feature depth and security required to enable resilient delivery of a wide range of application workloads for organizations of all sizes and capabilities. ECS Connection Manager simplifies Dell EMC ECS application delivery with easy management via web UI, API and Kemp 360 Central with a compelling TCO and outstanding customer support.

Benefits of Kemp ECS Connection Manager

Resilient
ECS Connection Manager can enhance application availability and resilience with the option for Highly Available (HA) paring of appliances and geographic server load balancing (GSLB) removing single points of failure in the data center and also across data centers. Application server health checks enable redirection of traffic to healthy servers and the optional Kemp 360 Vision service provides 24/7 proactive support to ensure continuous application availability.

Secure
As the access point for applications, ECS Connection Manager provides authentication and attack mitigation services to prevent malicious and unauthorized access to application resources. The Edge Security Pack (ESP) enables pre-authentication of clients (LDAP, Active Directory, RADIUS and SAML) while the Web Application Firewall (WAF) offers continuous application level protection through daily rule updates. Kemp is fully aware of federal mandates and public laws and has incorporated a FIPS 140-2 certified software encryption module into our core operating system and made it available on the ECS Connection Manager.

Easily Managed
ECS Connection Manager appliances can be managed via the intuitive web UI, via API (PowerShell/RESTful) or via Kemp 360 Central. Application templates simplify deployment and optimization, while the API provides an easy way to automate configuration and management tasks whether through DevOps toolsets or operational frameworks.

Deliver Anywhere
Virtual ECS Connection Manager instances can be deployed on all major hypervisors and on leading public cloud services with a consistent set of features regardless of where deployed. Consistency across a wide range of platforms greatly simplifies cloud migration and hybrid cloud deployments with seamless migration and reduced management complexity.

Low Cost of Ownership
ECS Connection Manager delivers performance and functionality at a compelling price point when measured against the key metrics of SSL transactions per second, application throughput and active connections. Coupled with the low operational overheads delivered by features such as application templates and our world class customer support services, organizations can achieve significant TCO reductions on application delivery.

Fully Featured
Dell EMC ECS “XOR” storage efficiency leverages the optimized scheduling component of Kemp ECS Connection Manager. This method utilizes a URL Hash algorithm to distributed writes evenly across multiple sites and sends all reads to the site owning the object. This reduces ECS system overhead and WAN bandwidth providing greater performance and optimization of S3 traffic. The ECS Connection Manager includes a comprehensive set of features to enable deployment of application delivery and interfaces and API to integrate with existing authentication, logging, management and provisioning systems.
Support Subscriptions

ECS Connection Manager support subscription offers flexibility, simplicity and value to meet your application delivery requirements and challenges. The ECS tier is mapped to common customer challenges and requirements, simplifying the task of selecting the appropriate feature set and support level.

**ECS Connection Manager Support Subscription Tier**

Each support subscription tier adds to the features and services delivered by lower tiers as follows.

<table>
<thead>
<tr>
<th>ECS</th>
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<tbody>
<tr>
<td>24x7 Customer Support</td>
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<tr>
<td>Software Updates</td>
</tr>
<tr>
<td>Security Patches</td>
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<tr>
<td>L4-L7 Application Delivery</td>
</tr>
<tr>
<td>24x7 Customer Support</td>
</tr>
<tr>
<td>Edge Security Pack (ESP)</td>
</tr>
<tr>
<td>Intrusion Prevention</td>
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<tr>
<td>WAF with rule updates</td>
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<tr>
<td>GSLB with IP Reputation</td>
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<tr>
<td>Floating License</td>
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<tr>
<td>Kemp 360 Vision</td>
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<tr>
<td>Kemp 360 Central</td>
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</tbody>
</table>
Features

L4-L7 Application Delivery

General

- Server Load Balancing (SLB) for TCP/UDP based protocols
- TLS (SSL) Offload
- Layer 7 Content Switching
- Transparent caching for HTTP/HTTPS
- Compression of static and dynamic HTTP/HTTPS content
- HTTP/2 Support
- Up to 1000 Virtual and 1000 Real Servers
- NAT-based forwarding
- Support for Direct Server Return (DSR) configurations
- Configurable S-NAT support
- VLAN Trunking (802.1Q)
- Link interface bonding (802.3ad)
- IPv6 support for addressing and features
- IPv6 - IPv4 bidirectional conversion

Health Checking

- Aggregated health checks
- ICMP health checking
- Layer 7 checking against any target server port
- Active/Hot Standby configurations for High Availability
- Stateful Failover
- Scale-out Clustering
- Aggregated health checks

Session Persistence

- Source IP (L4)
- TLS (SSL) SessionID (L4)
- HTTP/HTTPS Browser-session (L7)
- HTTP/HTTPS WebClient-session (L7)
- RDP Login ID (L7)
- Port Following for mixed HTTP/HTTPS sessions
- Session reconnection for Microsoft RDS

Scheduling and Balancing Methods

- ECS S3
- SDN Adaptive
- Round Robin
- Weighted Round Robin
- Least Connection
- Weighted Least Connection
- Agent-based Adaptive
- Chained Failover (Fixed Weighting)
- Source-IP Hash
- Layer 7 Content Switching
- Global Server Load Balancing (GSLB)
- AD Group based traffic steering

SSL/TLS Features

- Configurable TLS (1.0, 1.1, 1.2, 1.3) and SSL (2.0, 3.0)
- Support for EV (Extended Validation) certificates
- OCSP certificate validation
- Server Name Identification (SNI) support
- Support for up to 1,000 TLS (SSL) certificates
- Automated TLS (SSL) certificate chaining
- Certificate Signing Request (CSR) generation
- FIPS 140-2 Level 1
- STARTTLS mail protocols (POP3, SMTP, IMAP)

Administration

- Change auditing
- Web User Interface (WUI)
- SSH & physical console
- RESTful and PowerShell APIs
- VMware vRealize Orchestrator
- Context based help (WUI)
- Real time display of performance and availability
- Application templates
- Remote syslogd support
- Automated configuration backup
- Selective restore of configuration
- Connection draining
- Comprehensive logging and reporting
- SNMP support
- Diagnostic shell with in-line tcpdump

Security

- Permit /Deny Access Control Lists
- IP address filtering
- IPsec Tunnel support
- DDoS mitigation, including L7 rate-based attacks
- IPsec VPN to Azure, AWS and public clouds
- Authenticated NTP
**Features**

**Kemp 360 Central**
- Included with ECS Subscription
- Configuration Management
- Automated backups
- Centralized & scheduled firmware updates
- Logfile consolidation
- Performance Management
- 3rd party load balancer support

**Kemp 360 Vision**
- Included with ECS Subscription
- 24/7 Automated issue escalation service
- Proactive issue management
- Integrated with Kemp Support ticketing

**Edge Security Pack**
- Microsoft TMG replacement
- Pre-Authentication
- Multi-Domain authentication & SSO
- X.509 client certificate authentication
- Custom login forms
- Two factor authentication
- SAML, Active Directory, RADIUS & LDAP
- Forms to Forms based authentication

**Intrusion Prevention**
- Snort Compatible IPS
- Permit/Deny IP by address
- Automated IP reputation updates for GSLB

**Web Application Firewall (WAF)**
- Real-time application threat mitigation
- Daily rule updates
- Threats Mitigated
  - Cookie tampering
  - Cross site request forgery
  - Cross site scripting
  - Data loss prevention
  - SQL Injection
  - PCI-DSS Section 6.6 compliance

**Global Server Load Balancing (GSLB)**

**Scheduling and Balancing**
- Round Robin
- Weighted Round Robin
- Chained Failover (Fixed Weighting)
- Regional
- Real Server Load
- Location Based

**Security**
- Black List (Access Control List)
- IP reputation filtering with automatic updates
- DDoS mitigation

**Health Checking & Failover**
- ICMP health checking of server farm machines
- Layer 4 TCP checking
- HTTP/HTTPS health check
- Active/Active High Availability
## ECS Connection Manager Platform Support

### Virtual ECS Connection Manager on Hypervisor

Virtual ECS Connection Manager is available on Hyper-V, VMware, XEN, KVM and VirtualBox.

<table>
<thead>
<tr>
<th></th>
<th>VM1</th>
<th>VM2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subscription Tiers Supported</strong></td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td><strong>Licensed Performance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Throughput</td>
<td>3 Gbps</td>
<td>10 Gbps</td>
</tr>
<tr>
<td>SSL TPS</td>
<td>4,000</td>
<td>12,000</td>
</tr>
<tr>
<td>Concurrent Layer 4 Connections(‡)</td>
<td>3,000,000</td>
<td>3,000,000</td>
</tr>
<tr>
<td>Max Servers/ Virtual Clusters</td>
<td>1000/1000</td>
<td>1000/1000</td>
</tr>
</tbody>
</table>

‡ Achievement of this licensed performance level depends on hypervisor resources allocated