Connection Manager for ObjectScale Hardware

DATA SHEET

Scalable high-performance application delivery

Progress® Connection Manager for ObjectScale 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. Connection Manager for ObjectScale simplifies Dell ObjectScale application delivery with easy management via web UI, API with a compelling TCO and outstanding customer support.

Benefits of Connection Manager for ObjectScale

Multi-network Access
Connection Manager for ObjectScale provides transparent access to ObjectScale from multiple networks while maintaining security and existing network addressing.

Optimized ObjectScale QoS (Quality of Service)
Apply QoS to any resource (bucket, URI) to ensure optimal performance of critical applications and protect against traffic storms and 'noisy neighbors'.

Secure using TLS 1.3
Connection Manager for ObjectScale provides the latest and most robust security by enabling TLS 1.3 security without any impact on ObjectScale infrastructure.

Concurrent IPv6 and IPv4
Connection Manager for ObjectScale allows IPv6 and IPv4 co-existence with IPv6 to IPv4 gateway/ proxy using a NIST IPv6 Ready network stack as required by federal customers.

SSL Offload
Connection Manager for ObjectScale simplifies the management of certificates and security policies while also reducing the security overheads on the ObjectScale infrastructure.

Route based on DNS query source
Optimize traffic routing by using the source subnet of the client where provided via EDNS (Extensions for DNS). Client traffic can now be mapped to specific storage locations to provide fine-grained control to support use cases such as localized in-rack traffic steering and routing ISP/ customer networks to dedicated storage.

Seamless VDC failover

Connection Manager for ObjectScale provides support for multi-site VDC environments with totally transparent failover and recovery in the event of a VDC outage with dynamic host resolution. Support up to 256 storage IP addresses on a single FQDN.

Purpose built S3 traffic steering

Intelligently deliver traffic to the S3 location that can best service the requests including storage using XOR optimizations.

S3 Health Checking

S3 optimized detection of outages and service degradation with redirection of traffic to resources that can service requests.

Hybrid path and host addressing

Concurrent support of S3 'Path Style' and 'Host' addressing enabling support of multiple applications using different addressing against the same storage objects.

Support Subscriptions

Connection Manager for ObjectScale support subscription offers flexibility, simplicity and value to meet your application delivery requirements and challenges. The support subscriptions are mapped to common customer challenges and requirements and include multiyear support options.

Support subscription options include single or multi-year support and offer the benefits mentioned previously as well as the following of features and services:

- 24x7 Customer Support
- Software Updates
- Security Patches
- L4-L7 Application Delivery
- Edge Security Pack (ESP)
- Intrusion Prevention
- WAF with updated reputation data daily
- Optimized QoS (Quality of Service)
- S3 traffic steering
- GSLB with updated reputation data daily
- Network Telemetry
- Floating License

Features
Network Telemetry

- Export network flow data to Flowmon Collector in the industry standard IPFIX protocol format.
- Leverage the power of Flowmon Collector to store and analyze flow data, gaining visibility into the entire application value delivery chain to identify bottlenecks, misconfigurations, and potential security issues.
- Combine LoadMaster-exported data with IPFIX data from other network nodes on Collector to gain a complete picture of your infrastructure.
- View LoadMaster data on Flowmon Collector in dashboards and widgets specific to LoadMaster and the Virtual Services defined on it.

Web Application Firewall (WAF)

- Real-time application threat mitigation
- Updated reputation data daily
- Threats mitigated
  - Cookie tampering
  - Cross site request forgery
  - Cross site scripting
  - Data loss prevention
  - SQL injection
  - PCI-DSS Section 6.6 compliance

Edge Security Pack

- Microsoft TMG replacement
- Pre-authentication
- Multi-domain authentication & SSO
- X.509 client certificate authentication
- Custom login forms
- Two-factor authentication
- OIDC, SAML, Active Directory, RADIUS & LDAP
- Forms to Forms based authentication

Intrusion Prevention

- Snort compatible IPS
- Aggregated health checks

Global Server Load Balancing (GSLB)
Scheduling and Balancing

- Round Robin
- Weighted Round Robin
- Chained Failover (Fixed Weighting)
- Regional
- Real Server Load
- Location Based
- EDNS Client subnet

Security

- Allow/Deny List (Access Control List)
- Updated reputation data daily
- DDoS mitigation

Health Checking & Failover

- ICMP health checking of server farm machines
- Layer 4 TCP checking
- HTTP/HTTPS health check
- Active/Active High Availability
- Scale to 256 nodes per FQDN

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 total Virtual Services and SubVSs
- Up to 1000 total Real Server IP addresses
- Unlimited assignment of IP:port combinations to VSs and Sub VSs
- NAT-based forwarding
- Support for Direct Server Return (DSR) configurations

Progress®

- Configurable S-NAT support
- VLAN Trunking (802.1Q)
- Link interface bonding (802.3ad)
- NIST IPv6Ready certified
- IPv6 support for addressing and features
- IPv6 to IPv4 gateway/proxy using a NIST IPv6 Ready network stack

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

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

- 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

- Allow/Deny List (Access Control List)
- IP address filtering
- IPsec Tunnel support
- DDoS mitigation, including L7 rate-based attacks
- IPSec VPN to Azure, AWS, and public clouds
- Authenticated NTP

Specification

	Connection Manager for ObjectScale H1 NG	Connection Manager for ObjectScale H2 NG
Performance	●	●
Application throughput (Layer 4)	15.8 Gbps	26.2 Gbps
Application throughput (Layer 7)	15 Gbps	25 Gbps
Bulk Encryption	8 Gbps	20 Gbps
SSL TPS (2K Keys)	9,000	25,000
Concurrent Layer 4 Connections	17,200,000	75,800,000
Concurrent Layer 7 Connections	300,000	525,000
Layer 7 HTTP requests/sec	800,000	1,000,000
Layer 4 requests/sec	1,600,000	2,000,000
Layer 4 connections/sec	450,000	725,000
Hardware Platform		
CPU	2.1GHz, 12C/20T	2x 2.3GHz, 20C/40T
Memory (RAM Size)	16GB	64GB
Storage	2x 1TB HDD (RAID 1)	2 x 1TB HDD (RAID 1)
Gigabit Ethernet Ports	4	2
10 Gigabit Ports (SFP+)	4	8
25 Gigabit Ports (SFP28)	4	0
Monitor / Display Ports	HDMI	VGA
Console Ports	1x USB Type-C	1 RJ45
Rack Size	1U	2U
Dimensions	511 x 438 x 44mm	438 x 650 x 88mm
Weight	22.9lbs / 10.4kg	35.2lbs / 16kg
Storage Temperature	-4 to 167 °F (-20 to 75 °C)	-4 to 167 °F (-20 to 75 °C)
Operating Temperature	32 to 104 °F (0 to 40 °C)	32 to 104 °F (0 to 40 °C)
Storage Humidity	10% to 90% non-condensing	10% to 90% non-condensing
Operating Relative Humidity	10% to 90% non-condensing	10% to 90% non-condensing
Max Altitude in Operational Mode	16,404 feet (5,000 meters)	16,404 feet (5,000 meters)
Max Altitude in Non-Operational Mode	49,869 feet (15,200 meters)	49,000 feet (15,200 meters)
Input Voltage and Frequency Ranges	100-240VAC, 47-63Hz	100-240VAC, 47-63Hz
Hot-Swap, Redundant Power Supply	Yes	Yes
Max power supply	2x 550W	2 x 1300W
Average Power Consumption	91.2W	361.68W
Total Amp Drawn	7.6 Max	7.2 Max
Heat Output (BTU)	310.99 Max	1131.96 Max
Acoustic Noise (dB)	62.7	79.4

	Connection Manager for ObjectScale H3 NG
Performance	●
Application throughput (Layer 4)	35 Gbps
Application throughput (Layer 7)	35 Gbps
Bulk Encryption	20 Gbps
SSL TPS (2K Keys)	35,000
Concurrent Layer 4 Connections	75,800,000
Concurrent Layer 7 Connections	525,000
Layer 7 HTTP requests/sec	1,250,000
Layer 4 requests/sec	2,600,000
Layer 4 connections/sec	850,000
Hardware Platform	
CPU	2 x 2.3GHz, 20C/40T
Memory (RAM Size)	64GB
Storage	2 x 1TB HDD (RAID 1)
Gigabit Ethernet Ports	2
10 Gigabit Ports (SFP+)	8
Monitor / Display Ports	VGA
Console Ports	1 RJ45
Rack Size	2U
Dimensions	438 x 650 x 88mm
Weight	35.2lbs /16kg
Storage Temperature	-4 to 167 °F (-20 to 75 °C)
Operating Temperature	32 to 104 °F (0 to 40 °C)
Storage Humidity	10% to 90% non-condensing
Operating Relative Humidity	10% to 90% non-condensing
Max Altitude in Operational Mode	16,404 feet (5,000 meters)
Max Altitude in Non-Operational Mode	49,000 feet (15,200 meters)
Input Voltage and Frequency	100-240VAC, 47-63Hz
Redundant Power Supply	Yes
Hot-Swap, Max power supply	2 x 1300
Average Power Consumption (W)	361.68
Total Amp Drawn (A)	7.2 Max
Heat Output (BTU)	1131.96 Max
Acoustic Noise (dB)	79.4

	Connection Manager for ObjectScale H4 55 NG	Connection Manager for ObjectScale H4 75 NG
Performance	●	●
Application throughput (Layer 4)	57 Gbps	77 Gbps
Application throughput (Layer 7)	55 Gbps	75 Gbps
Bulk Encryption	35 Gbps	40 Gbps
SSL TPS (2K Keys)	40,000	40,000
Concurrent Layer 4 Connections	151,600,000	151,600,000
Concurrent Layer 7 Connections	1,050,000	1,050,000
Layer 7 HTTP requests/sec	1,500,000	1,500,000
Layer 4 requests/sec	3,000,000	3,000,000
Layer 4 connections/sec	1,000,000	1,000,000
Hardware Platform		
CPU	2x 3.0GHz, 18C/36T	2x 3.0GHz, 18C/36T
Memory (RAM Size)	128GB	128GB
Storage	2 x 1TB HDD (RAID 1)	2 x 1TB HDD (RAID 1)
Gigabit Ethernet Ports	2	2
10 Gigabit Ports (SFP+)	8	8
25 Gigabit Ports (SFP28)	4	4
100 Gigabit Ports (QSFP28)	4	4
Monitor / Display Ports	VGA	VGA
Console Ports	1 RJ45	1 RJ45
Rack Size	2U	2U
Dimensions	438 x 650 x 88mm	438 x 650 x 88mm
Weight	35.2lbs /16kg	35.2lbs /16kg
Storage Temperature	-4 to 167 °F (-20 to 75 °C)	-4 to 167 °F (-20 to 75 °C)
Operating Temperature	32 to 104 °F (0 to 40 °C)	32 to 104 °F (0 to 40 °C)
Storage Humidity	10% to 90% non-condensing	10% to 90% non-condensing
Operating Relative Humidity	10% to 90% non-condensing	10% to 90% non-condensing
Max Altitude in Operational Mode	16,404 feet (5,000 meters)	16,404 feet (5,000 meters)
Max Altitude in Non-Operational Mode	49,000 feet (15,200 meters)	49,000 feet (15,200 meters)
Input Voltage and Frequency	100-240VAC, 47-63Hz	100-240VAC, 47-63Hz
Redundant Power Supply	Yes	Yes
Hot-Swap, Max power supply	2 x 1300	2 x 1300
Average Power Consumption (W)	442.56	442.56
Total Amp Drawn (A)	7.2 Max	7.2 Max
Heat Output (BTU)	1285.4 Max	1285.4 Max
Acoustic Noise (dB)	79.4	79.4

	Connection Manager for ObjectScale H4 100 NG
Performance	●
Application throughput (Layer 4)	91 Gbps
Application throughput (Layer 7)	90 Gbps
Bulk Encryption	45 Gbps
SSL TPS (2K Keys)	45,000
Concurrent Layer 4 Connections	151,600,000
Concurrent Layer 7 Connections	1,050,000
Layer 7 HTTP requests/sec	1,500,000
Layer 4 requests/sec	3,000,000
Layer 4 connections/sec	1,000,000
Hardware Platform	
CPU	2x 3.0GHz, 18C/36T
Memory (RAM Size)	128GB
Storage	2 x 1TB HDD (RAID 1)
Gigabit Ethernet Ports	2
10 Gigabit Ports (SFP+)	8
25 Gigabit Ports (SFP28)	4
100 Gigabit Ports (QSFP28)	4
Monitor / Display Ports	VGA
Console Ports	1 RJ45
Rack Size	2U
Dimensions	438 x 650 x 88mm
Weight	35.2lbs /16kg
Storage Temperature	-4 to 167 °F (-20 to 75 °C)
Operating Temperature	32 to 104 °F (0 to 40 °C)
Storage Humidity	10% to 90% non-condensing
Operating Relative Humidity	10% to 90% non-condensing
Max Altitude in Operational Mode	16,404 feet (5,000 meters)
Max Altitude in Non-Operational Mode	49,000 feet (15,200 meters)
Input Voltage and Frequency	100-240VAC, 47-63Hz
Redundant Power Supply	Yes
Hot-Swap, Max power supply	2 x 1300
Average Power Consumption (W)	442.56
Total Amp Drawn (A)	7.2 Max
Heat Output (BTU)	1285.4 Max
Acoustic Noise (dB)	79.4

Certification & Compliance

	Connection Manager for ObjectScale H1 NG	Connection Manager for ObjectScale H2 NG & H3 NG & H4 55/75/100 NG
FIPS	FIPS 140-2 Level 1 NIST Cert 4862	FIPS 140-2 Level 1 NIST Cert 4862
Common Criteria	CCEVS-VR-VID11280-2023	CCEVS-VR-VID11280-2023
Safety Agency Approval: (IEC, EN, BS, CSA, UL)	IEC 62368-1:2014 2nd Ed. EN 62368-1:2014 EN 62368-1:2014/AC:2015 EN 62368-1:2014+A11:2017 BS EN 62368-1:2014 + A11:2017 AS/NZS 62368.1:2018 AS/NZS 62368.1:2022	EN 62368-1:2014, EN 62368-1:2014+A11:2017, IEC 62368-1:2104 BS EN 62368-1:2014+A11:2017 AS/NZS 62368.1:2018 AS/NZS 62368.1:2022
Electromagnetic Compatibility (EMC) Certifications: (CE, UKCA, FCC, VCCI)	EN 55032:2015 +A11:2020 EN 55035:2017 +A11:2020 EN 61000-3-2:2014 EN IEC 6100-3-2:2019/A1:2021 EN 61000-3-3:2013 EN 61000-3-3:2013/A2:2021 EN IEC 62368-1:2020 EN IEC 62368-1: 2020+A11:2020 BS EN 55032:2015 +A11:2020 BS EN 55035:2017 +A11:2020 BS EN 61000-3-2:2014 BS EN IEC 6100-3-2:2019/A1:2021 BS EN 61000-3-3:2013 BS EN 61000-3-3:2013/A2:2021 BS EN IEC 62368-1:2020 BS EN IEC62368-1:2020+A11: 2020 FCC 47 CFR PART 15 SUBPART B ANSI C63.4:2014 ANSI C63.4a: 2017 VCCI-CISPR32: 2016	EN 55032:2015 +A11:2020 EN 55035:2017 +A11:2020 EN IEC 6100-3-2:2019/A1:2021 EN 61000-3-2:2014 EN 61000-3-3:2013 EN 61000-3-3:2013/A2:2021 EN IEC 62368-1:2020 EN IEC 62368-1: 2020+A11:2020 IEC 62368-1:2018 (3rd Ed.) BS EN 55032:2015 +A11:2020 BS EN 55035:2017 +A11:2020 BS EN IEC 6100-3-2:2019/A1:2021 BS EN 61000-3-2:2014 BS EN 61000-3-3:2013 BS EN 61000-3-3:2013/A2:2021 BS EN IEC 62368-1:2020 BS EN IEC62368-1:2020+A11: 2020 FCC 47 CFR PART 15 SUBPART B ANSI C63.4:2014 VCCI-CISPR32: 2016
RoHS Compliant	Yes	Yes
WEEE Compliant	Yes	Yes
REACH Compliant	Yes	Yes

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