

Progress® Kemp® ECS Connection Manager

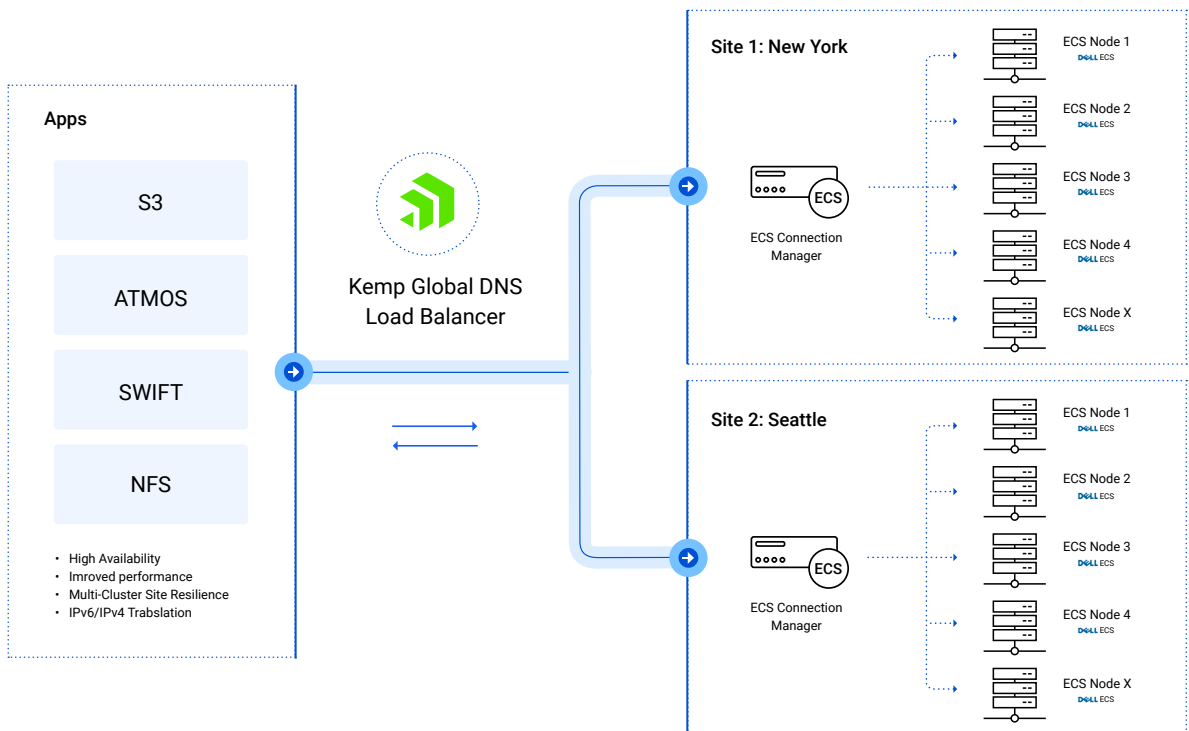
DATA SHEET

Introduction

Progress® Kemp® ECS Connection Manager enhances the availability, performance and operation of Dell ECS object storage environments by intelligently load balancing traffic across the ECS infrastructure.

Scalable with Zero Downtime

With modern applications and the ever-increasing amount of data being stored, availability is of the utmost importance. ECS Connection Manager enhances the availability and performance of Dell ECS next-generation software-defined storage therefore maximizing customers' infrastructure investment. Dell ECS and ECS Connection Manager combine to deliver a cloud storage platform that supports the storage, manipulation, and analysis of unstructured data with massive scale. ECS Connection Manager hardware and virtual appliances are now available from Dell through the Select Partner Program.



ECS Connection Manager and Dell ECS solution

Dell ECS recommends ECS Connection Manager to customers to provide enterprise-level high availability and performance expected in today's market. When non-interrupted access to data stored in Dell ECS is required, ECS Connection Manager provides advanced application-level health checking to ensure the ECS nodes are healthy and ready to accept connections. In the event a node is offline whether unscheduled or during a maintenance window, ECS Connection Manager will mark that node as down and redirect traffic to the other healthy nodes. Using SSL/TLS offloading will provide greater performance by terminating the secure connection on the ECS Connection Manager and sending traffic back to ECS unencrypted. This configuration eliminates the encryption processing overhead on the ECS nodes and places it on the ECS Connection Manager which is optimized to handle this traffic. Organizations that have adopted IPv6 can leverage ECS Connection Manager as a gateway to allow for communication between the end points over IPv6 and Dell ECS over IPv4. This translation simplifies deployments in these mixed environments and still delivers the same high availability and performance.

ECS Connection Manager Site Resilience

Providing high availability within a single Dell ECS cluster is essential, but it is not uncommon for organizations to distribute data across multiple clusters. These clusters are often in different data centers, deployed in an active/active configuration. ECS Connection Manager Global Server Load Balancing (GSLB) provides intelligent geographic distribution of traffic based on proximity which provides better performance and, in the event of a complete site failure, directs all traffic to a healthy datacenter. GSLB offers scheduling methods for directing traffic to sites hosting ECS clusters, meeting the needs of every organization.

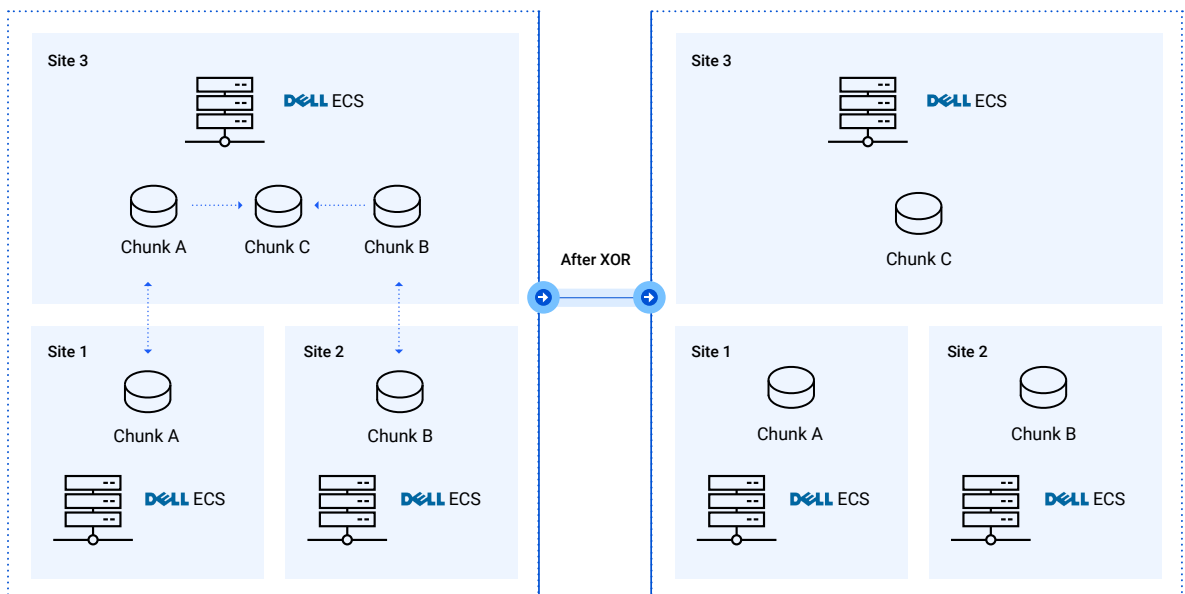
- Round Robin
- Weighted Round Robin
- Fixed Weighting
- Real Server Load
- Proximity
- Location Based

Maintaining Critical Application Performance with QoS

ECS Connection Manager implements QoS (Quality of Service) controls to rate limit connections and requests to Dell ECS platforms providing full control over the levels of service provided to applications and users. With QoS, administrators can implement fair and balanced allocation of service across multiple workloads and ensure critical applications are not impacted by excessive requests generated by rogue applications. QoS controls may be applied based on connection rate or request rate with the option of providing graceful throttling of requests with a HTTP 429 response (Too many requests) or with a 503 response (Service unavailable). For maximum flexibility controls can be applied based on the client (source) or on the ECS resource (target) being accessed.

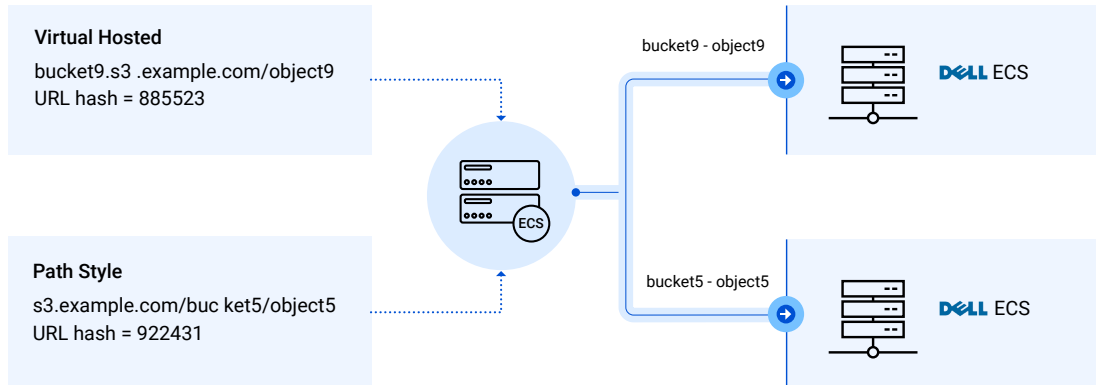
S3 Optimized Scheduling

Dell ECS “XOR” storage efficiency leverages the optimized scheduling component of 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.



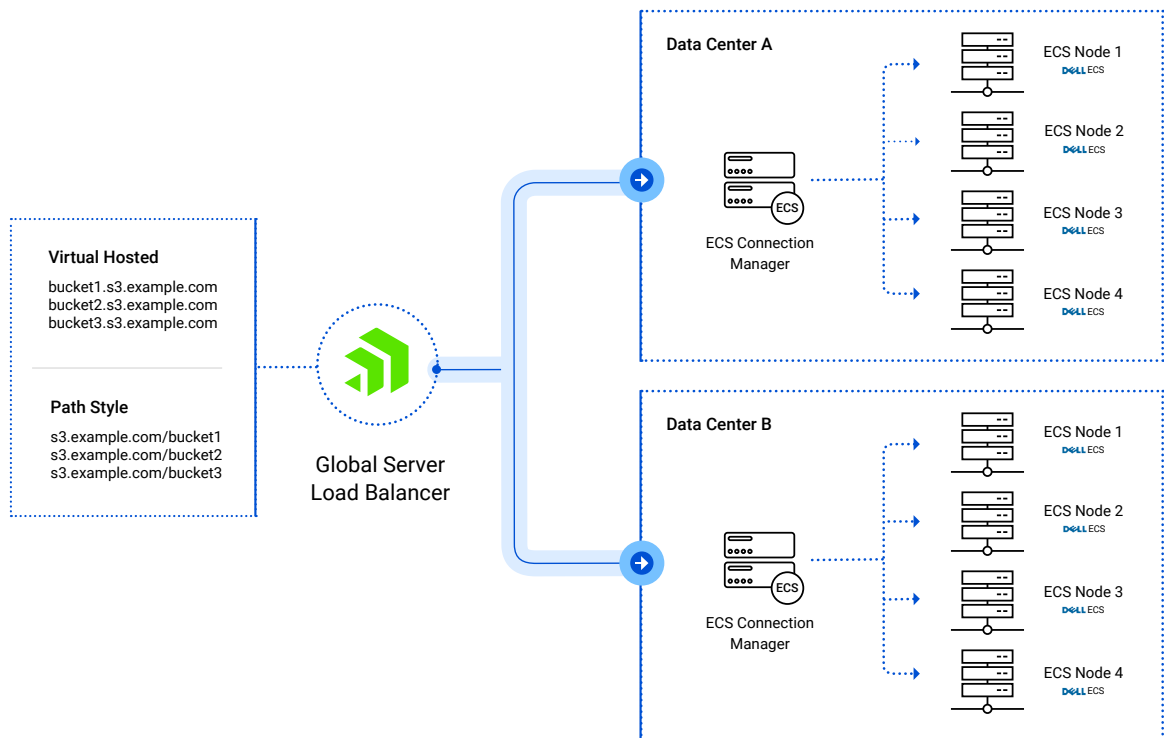
S3 Addressing Auto-Detection

ECS currently supports two addressing methods, Path Style and Virtual Hosted Addressing. In most ECS environments consisting of multiple sites that require the “XOR” storage efficiency and/or geographic distribution, the need to support both methods becomes essential. ECS Connection Manager delivers S3 Addressing Auto-Detection to simplify the configuration while providing the optimized distribution of objects throughout the ECS solution using both addressing methods seamlessly.



Dynamic Global Host Resolution

Most ECS deployments include multiple geographic locations providing the required site resilience for the object storage solution. ECS Connection Manager’s Global Server Load Balancing (GSLB) feature distributes traffic across these multiple locations with the use of intelligent DNS. The implementation of GSLB will be different contingent on whether the applications accessing the storage leverage Path Style or Virtual Hosted addressing methods. This is due to behavior of Virtual Hosted which now includes the S3 bucket names within the HTTP Host Header requiring DNS to support this dynamic addressing method. ECS Connection Manager takes this requirement and extends it to support Dynamic Global Host Resolution within GSLB to provide the flexible multi-site distribution and availability for ECS deployments leveraging both Path Style and Virtual Hosted addressing.

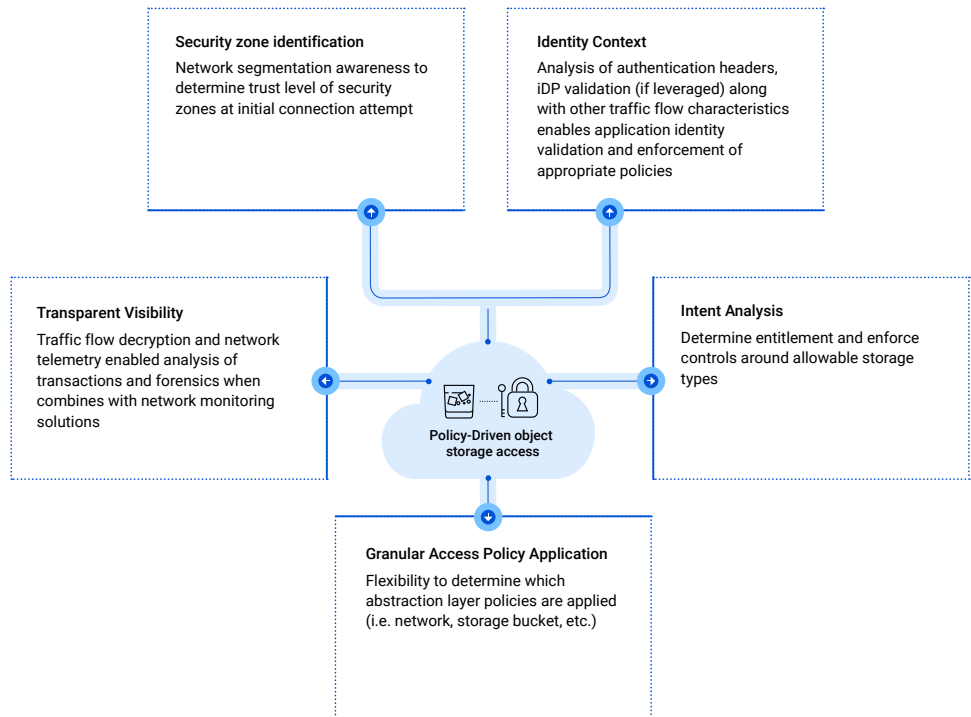


Zero Trust Access

ECS Connection Manager optimizes object storage environments by enforcing QoS policies, enabling distributed single namespace deployment, enhancing S3 traffic flow efficiency and providing frontend proxy optimization. When leveraged as a Zero Trust Access Gateway (ZTAG), ECS Connection Manager provides additional security features for object storage deployments.

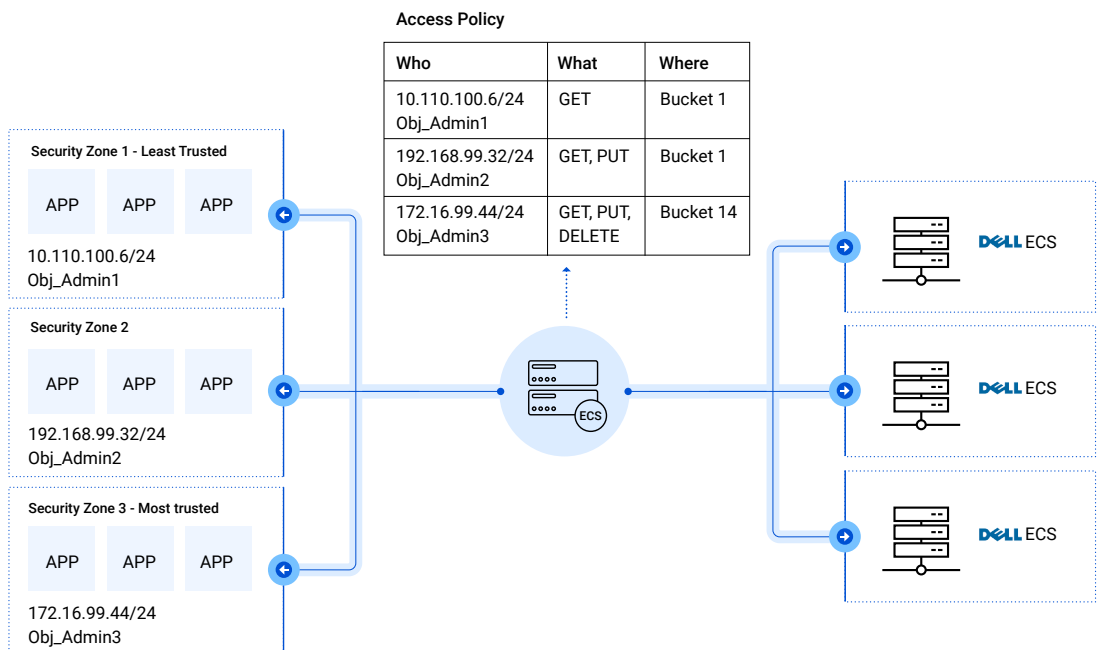
Object storage helps customers streamline modern application deployment with improved economics, efficiency and more accessible data analytics. When proxying object storage deployments, ECS Connection Manager is in the optimal position to apply a zero trust security model for compliant, policy-based access control with the following key capabilities:

- Default least privileged security model
- Fine grain access control
- Security zone-based policy logic
- Bucket and object level policy application
- Storage operation awareness



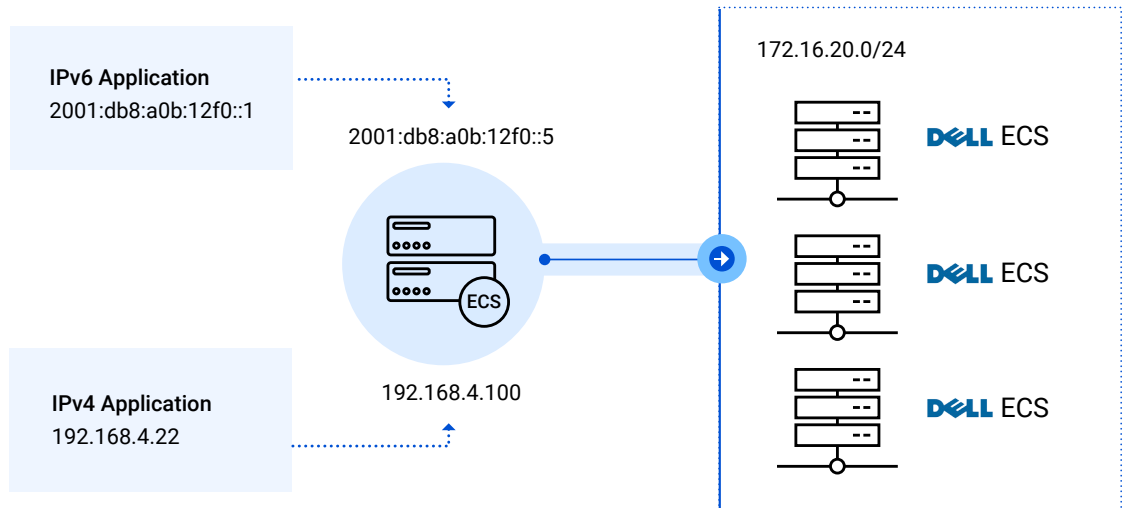
Deployment model

With a Zero Trust Access Gateway deployment model, object storage ecosystems are protected with per bucket access control for S3 operations. An infrastructure-as-code model for maintaining desired configuration state simplifies application and maintenance of complex object storage access policies.



IPv6 to IPv4 with Network Isolation

ECS Connection Manager extends the reach of ECS services to multiple IPv6 and IPv4 networks while preserving network isolation. Enabling access from IPv6 networks to ECS is as simple as adding the ECS Connection Manager to the IPv6 network and creating a service that points to the ECS IPv4 infrastructure.



In the example above, the IPv6 and IPv4 applications have concurrent access to ECS with the ECS Connection Manager providing network isolation. Multiple IPv6 and IPv4 networks may be supported with options to isolate using VLANs or with physically different network ports on hardware appliances.

Federal Information Processing Standards and IPv6 (USGv6)

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 to all ECS Connection Managers. This has become mandatory across most verticals to deliver the security and compliance for today's modern applications. ECS Connection Manager is also fully certified for IPv6 operation under NIST USGv6 Revision 1 specifications as required under Federal Acquisition Regulations.

Why ECS Connection Manager

Kemp powers always-on application experience (AX) for enterprises and service providers. Kemp's agile consumption model, predictive analytics, and automated issue resolution, radically simplifies how customers optimize, analyse and secure their applications across private and multi-cloud environments. Enterprise, healthcare, government or service provider customers running Dell ECS benefit from enhanced performance and availability by including ECS Connection Manager in their environment.

About Progress

Dedicated to propelling business forward in a technology-driven world, [Progress](#) (NASDAQ: PRGS) helps businesses drive faster cycles of innovation, fuel momentum and accelerate their path to success. As the trusted provider of the best products to develop, deploy and manage high-impact applications, Progress enables customers to build the applications and experiences they need, deploy where and how they want and manage it all safely and securely. Hundreds of thousands of enterprises, including 1,700 software companies and 3.5 million developers, depend on Progress to achieve their goals—with confidence. Learn more at www.progress.com

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