Dell and Caringo: Petabyte+ Software-Defined Storage for the Post RAID Era

Caringo and Dell integrated software-defined storage attacks the cost of inflexibility at scale providing organizations across all industries with a cost-effective, massively scalable and easy to manage storage solution all on standard Dell servers and networking gear.

- **Scalable:** Seamlessly scale to 100s of petabytes and billions of objects. Mix old and new hardware with no forklift upgrades, ever.

- **Efficient:** Up to 98% HD utilization and adaptive power conservation, resulting in up to 35% less power consumption.

- **Manageable:** One system administrator can manage over ten petabytes.

- **Reliable:** RAID durability without RAID. Patented method of storing replicated and erasure coded segments on the same server for optimal efficiency.

- **Enterprise:** Supports WORM, integrity seals and the ability to prove regulatory compliance.

Unstructured data growth is a challenge faced by organizations of every size. Gartner estimates that over 80% of enterprise data is unstructured, projecting 800% growth by 2019. At the same time, the prevalence of Cloud, Big Data, Mobile, BYOD and Social Applications have changed the expectations of storage and data access. In today's world, users want to store everything and get it when they want from anywhere; however, this is difficult and expensive with traditional storage. The solution to these challenges is Caringo Swarm, software-defined object storage that can run on standard hardware that solves the scalability, accessibility and management issues inherent in traditional storage technologies.

Caringo Swarm leverages simple and emergent behavior with decentralized coordination to handle any rate, flow or size of unstructured data. All nodes can perform all processes delivering massively parallel storage and high automation on standard hardware. Swarm enables organizations to store data based on value and automatically shift protection methods based on policies stored in metadata. The other benefits of Swarm include:

- Swarm boots from bare metal and runs from RAM, resulting in up to 98% capacity utilization.
- Swarm truly eliminates storage complexity. There is no file system, no database, no LUNs, no RAID, no management nodes and no provisioning. This is why one system administrator with general IT knowledge can manage over 10 petabytes of storage.
- A symmetric architecture where all nodes cooperate to perform all processes, making everything from writing to recovering faster. Meta data is stored with the object decoupling it from location and applications. Applications and hardware can continually flow like a river above and beneath your data.
- A patented approach to storing erasure coded and replicated object on the same servers, automatically managed by lifepoints provides unrivaled flexibility and ease of scale while guaranteeing integrity.
- Adaptive power conservation that can save up to 35% in power and cooling.

The City of Austin's Public Safety Division recently implemented Swarm to store their video surveillance in 650 police vehicles. At 1.5 PB they had reached the scalability limit of the NAS/file system. Their data was growing at a rate of 2-4 PBs per day and they needed a storage solution that was cost effective, yet scalable at the same time. After looking at public cloud, hybrid-cloud, and local on-premise/private cloud, they landed on Caringo. They chose the Swarm system because it could massively scale, it did not have file systems limitations and it had the ability to tier data off of their traditional NAS into a much cheaper, more scalable storage system. The City of Austin saw immediate results, including:

- 50%+ cost savings over one refresh cycle
- Eliminated forklift upgrades
- Optimized their cash flow by shifting CAPEX to OPEX
- Pushed refresh cycle to six years, with the ability to mix old and new hardware
- The ability to store their existing 1.5 petabytes of information and to keep up with their 2-4 TB/day growth

For more information on this use case, please click here. Caringo has a storage solution for all organizations, ideal for cloud, big data and active archives in any industry. For more information please contact us at info@caringo.com.

About Caringo
Caringo was founded in 2005 and has been developing software-defined storage for nearly a decade, giving customers control over any volume, flow or size of unstructured information; dramatically reducing complexity and costs while extracting maximum value and performance from hardware. Caringo's unique benefits are delivered through a symmetric architecture that enables massive scalability, elastic content protection and automation of management in a comprehensive software suite. The result is the industry's most efficient object storage software ideal for cloud storage, big data and active archives in any industry.

Caringo Swarm is available through the Dell ISV catalogue. Together, Caringo and Dell have multiple multi-petabyte wins in various industries. Caringo works closely with Dell staff globally to ensure that customers' needs are met and that we collectively deliver on our mission to change the economics of storage.

The Dell Technology Partner Program
Caringo is a Dell Technology Partner and Caringo Swarm is certified by Dell to run on the Dell platforms specified in the technical architecture section.

The Dell Technology Partner program is a multi-tier program that includes ISVs, IHVs and Solution Providers. This global program helps partners build innovative and competitive business solutions using Dell platforms. Program resources keep customer costs low and help to sustain competitiveness.

The program has a structured and streamlined process that combines technology and business strategies with Dell Solution Center expertise to onboard and test partner products on Dell platforms. This testing process helps ensure that products have met the technical requirements to perform well on Dell platforms.