Edge Computing

Elevate edge computing advances with seamless data mobility

Vcinity ULTIMATE ACCESS

Solution Brief

An isolated edge is a stifled edge

The hype around "edge" and "edge computing" is driving a build of infrastructure at these often remote and dispersed locations, whether that be a tactical box for the military, an ingest station for an autonomous vehicle developer, or sensors on a manufacturing line. However, as compute power at these sites rises, a chasm—isolation—is inadvertently created between that edge and other edge or central locations. This is due to the perishability of data and time it takes transfer pre-processed edge data to other sites. Much of today's edge computing is used to curate or pre-process data, and the amount of horsepower now available at the edge allows this to happen very quickly. Once curation or pre-processing is complete, that information is typically shared with other locations for further analysis or action. Yet, by the time that information is sent from the edge over long distances with high latency, the data and insights may be stale... which can severely hinder the potential value of edge compute.

Data access, everywhere:

1. **Unparalleled performance**
   Transfers MBs to PBs of data faster than ever before (e.g. 1PB moved across the US over 100Gpbs in <24hours)
2. **Access more data types**
   No data manipulation required, meaning you can access non-compressible, non-dedupable, and encrypted data
3. **Easy to integrate**
   Presents as standard NFS, S3, SMB storage protocols
4. **Scale up, scale out**
   Scales up to 100Gbps and out to 100's of endpoints
5. **Maximize bandwidth**
   Sustain 90%+ of allocated bandwidth for continuous data throughput or access

Creating a connected edge

Edge compute is often used for pre-processing and curation of data in its proximity. This often means you don't want to move all the raw data—you only want to share certain results. Those highly critical, highly perishable results should also be instantly available. Vcinity gives you near real-time access to pre-processed and curated data as it's created—so you can run compute near-instantly or quickly and securely share data with other locations.

Vcinity makes access to data anywhere (like data at the edge or remote edge) possible via its accelerated data access capabilities: data movement and remote data access. Vcinity complements your existing infrastructure: it works with unstructured and encrypted data, as well as your existing networks (like satellite). This means no changes to data, no additional IT

IT refreshes required (especially after likely recent investments in high-powered edge compute), or workforce training. Skip the hassle and drop Vcinity in to connect the results of your edge compute with the people and places you need, when you need them—to drive business and mission value.

Mission and business transforming outcomes

Leveraging your edge data to drive real-time insights, results, and ROI? Start by getting the most of your existing infrastructure. Vcinity has proven, accelerated data access from edge to core to cloud, regardless of distance, latency, or scale.

NVIDIA	Oracle Cloud	Azure	aws
14 days to 16 min	**7 hrs to 25 min**	**24 hrs to 25 min**	**2.5 hrs to 2 min**
(1TB data move to GPU's over 5.5k miles)	(330GB AI Pile dataset over 7.4k miles)	(>1k small files dataset over 10.2k miles)	(>5TB small file size dataset over 2.8k miles)

Figure 1. Vcinity delivers validated, accelerated data access across industry-leading infrastructure providers, including transferring data direct into the GPU.

Near-instant access to decentralized data over distance and latency allows you to redefine what's possible—fueling increased competitiveness, more secure and faster decision-making, and opening new revenue opportunities.

Department of Defense	Government Agency	Large cruise line
24 hrs to 22 sec	**Days to >38 hrs**	**16 hrs to 27 min**
(4GB geospatial data over 7.3k miles)	(TB's of encrypted flight data over latent, classified environment)	(3GB file over 10k miles from shore to ship via satellite)

Figure 2. Commercial organizations across industries and federal agencies deploy Vcinity to dramatically change how quickly and how effectively they can use their disparate data.

Let's Get Started

Ready for consistent, high-performance data ingest and access to create a connected edge? Contact us at Vcinity (sales@vcinity.io or vcinity.io/book-demo) to have a conversation around your goals, workflows, and how to accelerate your agile, empowered edge!

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