

Multi-Cloud Infrastructure

WHAT IS IT?

The Velo platform can run on any cloud, or in an internal data center. Velo designed its solution to run simultaneously in one or more environments: AWS (Amazon), GCP (Google), Azure (Microsoft), a proprietary data-center (on-premise), or any combination thereof. Velo provides improved availability, reduced vendor lock-in and increased flexibility for our clients.

OVERVIEW

Velo is a disbursements payment platform, specifically designed for low dollar value, high volume, irregular transactions that are catalyzing the growth of the digital economy.

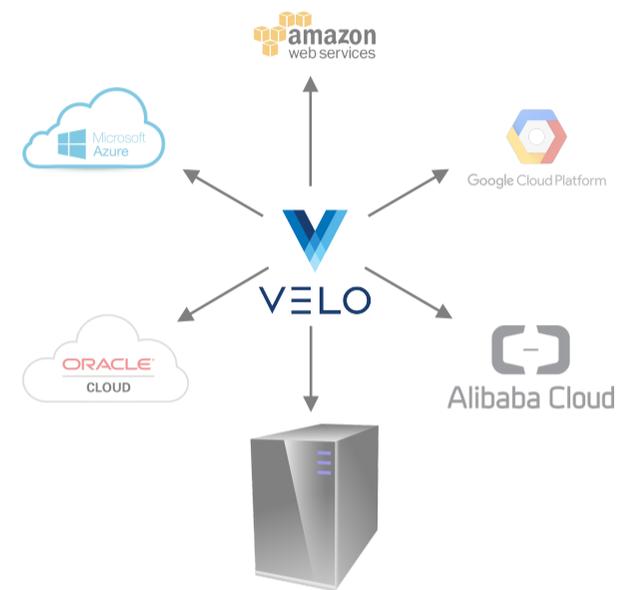
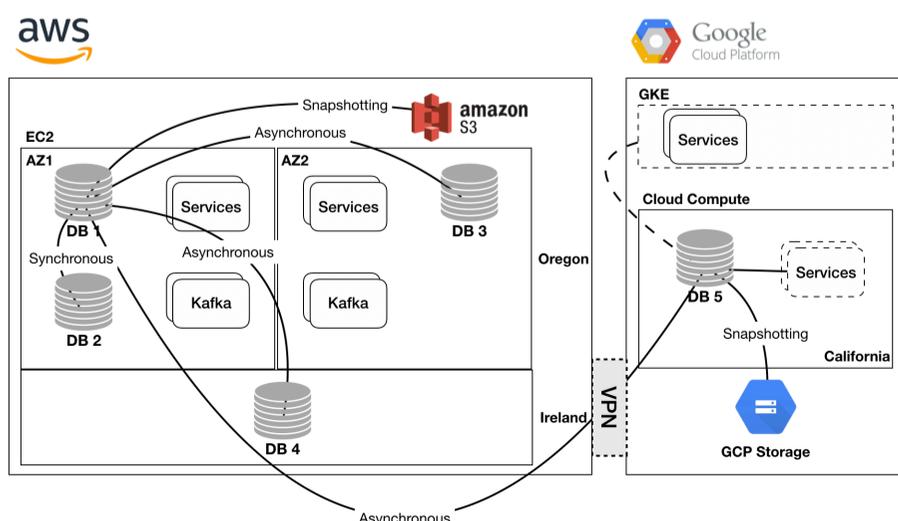
The capability to run the Velo platform in all environments is required. The default implementation is multi-cloud. However, Velo supports hybrid cloud - data center or solely data center implementations. Regulated entities who have constraints in their migration programs can enjoy peace of mind that present implementations can evolve with the evolution of their own cloud infrastructures.

Recognizing that no cloud is perfect, financial transactions need to be protected and operate with the utmost reliability. As reliance on any single cloud creates a point of failure, Velo runs live and simultaneously on multiple clouds as well as multiple data-centers, greatly reducing the risk of failure.

UNIQUE CAPABILITY IN THE MARKET

There are many companies that state that they are cloud-agnostic. This means they can run on one cloud or the other, e.g. AWS or GCP, but not multiple simultaneously. While this provides flexibility, it neither provides protection from outages, nor adequate disaster recovery. Certainty of immediate fail-over will always motivate financial institutions' considerations in their infrastructure decisions. Velo provides the best of both worlds.

DEFAULT MULTI-CLOUD IMPLEMENTATION IS LIVE



**MULTI-CLOUD,
NOT SIMPLY AGNOSTIC**
Velo runs simultaneously
in multiple clouds

AVOID LOCK IN
Velo switches across
multiple clouds in seconds

**BETTER THAN DR
IN A SINGLE CLOUD**
Multi-cloud removes any
single point of failure

PROTECTING CLIENTS FROM LOCK-IN

It is a natural tendency for a company to try to “lock in” their customers by providing an easy set-up service with equally easy repeat and expansion. Cloud hosting providers create lock in by providing proprietary features that notionally provide an advantage over alternatives. Adopting any features from any one cloud provider creates lock in, as switch cost are prohibitive. Most cloud features provide only short-term differentiation, due to the speed and resources of their competitors.

Since cloud vendors tend to use open-source applications (databases, messaging system, logging APIs etc.), Velo built its platform with open source as well. Velo uses the same base technology as the cloud vendors, but not their versions. As an example, Amazon’s native RDS (Relational Database Service) offers PostgreSQL as an option. Developers who use “RDS PostgreSQL” can not instantiate in Google or anywhere outside of AWS. Moreover, “native” PostgreSQL runs rather slowly. Velo leaned on its engineering skills to tune the open source PostgreSQL to work at full native performance on each of Amazon, Google and Microsoft cloud environments. Each implementation can replicate to one another in [near] real-time.

CLIENTS NEED MORE THAN 99.99% AVAILABILITY, THEY NEED FAILOVER

Today, leading cloud providers may claim 99.99% availability, or just over 50 minutes down-time annually. Velo transparently supports failover to another cloud or a local data-center. Based upon clients’ preferred cloud or data-center option(s), Velo configures availability: for example, a client may request 25% GCP, 75% AWS, with 100% passive stand-by on their local data-center. The flexibility allows for experimentation to drive optimal service delivery at the optimal cost of service.

MEET LOCAL DATA PRIVACY & STORAGE REQUIREMENTS

Velo accommodates multi-zone, data-sovereignty, data-localization and geo-fencing. Global corporates and payment providers can leverage Velo’s configurable multi-cloud implementations to support both their global and local requirements.

PRODUCTION & TESTING IN COMMON MULTI-CLOUD ENVIRONMENTS

Velo provides sandboxes and test systems in clouds or on-premise while planning for cloud migration. Due to a highly efficient data footprint, Velo runs on a medium-size server and scales up over time. Today Velo production system operates across two cloud providers at 1% capacity. Velo engineers, experts in scaling, have benchmarked the system to handle over 1,000 payments a second, over 25 million in an 8 hour period, which is approximately 10X the largest US bank today.

VELO’S CLOUD ARCHITECTURE - EXAMPLE

The diagram on the right shows the primary database running on one cloud (AWS) with multiple synchronized instances. The instances are running in the same, other cloud-zones and another cloud (GCP). All external inter-process communication is encrypted and over VPN. The system is designed security-first.

