

## REPORT REPRINT

# Coverage initiation: Volterra carving out a niche in cloud-native application distribution

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### Introduction

DIY or managed services? It's becoming a question of where enterprises want to spend their IT budgets. DIY IT, in the ways it has always been done, is advantageous because the enterprise has more control over the result, and can better plan projects on its own timeline. However, that flexibility comes at a significant operational cost – finding and retaining employees with the right skills, maintaining infrastructure, and having to adapt to multiple product release cycles.

Managed services offer less operational overhead and hand the customer results quicker than DIY, but are often less flexible and adaptable. The total cost ownership for managed services can also be significantly higher over a three- to five-year period compared to doing it yourself.

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### 451 TAKE

Volterra has identified a capability gap that enterprises will face as they modernize their application strategies: how to efficiently and effectively distribute cloud-native applications across multiple clouds and out to the edge without having to rebuild their entire software infrastructure. However, that capability gap may be one that enterprise IT hasn't yet seen because they are investigating other products that claim to manage cloud-native distributed applications as well. The competitive landscape is going to get crowded with vendors and services offering similar outcomes, which will make Volterra's road long and steep.

### Context

Among respondents to our Voice of the Enterprise: Digital Pulse, Vendor Evaluations survey, 52% said the cloud was their vehicle for digital transformation. Yet enterprises are still facing staffing challenges as they implement the cloud, with respondents from our Voice of the Enterprise: Digital Pulse, Organizational Dynamics indicating they lacked staff with skills in cloud architecture, cloud platforms and security.

Enterprises are training staff on modern technologies, but many are also opting for managed services, which takes away much of the operational overhead in managing the underlying infrastructure, and allows enterprises to deploy new applications quickly and reliably.

### Strategy

Volterra's goal is to remove operational complexity for enterprise IT and developers in operating distributed applications across multiple public and private cloud environments. VoltMesh and VoltStack are meant to remove the operational complexity faced by IT, compared to deploying a container environment, a service mesh, networking and security controls across multiple platforms.

By providing a prebuilt and pre-integrated managed service, customers can focus on getting distributed applications up and running, and spend less time gluing together multiple capabilities. It's a similar strategy to other single vendor strategies, where more integrated functionality is available out of the box, versus best-of-breed approaches where the customer must build similar integration.

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Volterra is couching its benefits in terms of rapid time to service for the enterprise with three reasons. First, IT doesn't have to spend time deploying and managing infrastructure. Second, risk is reduced and compliance improved because, through the service, customers can deploy and manage consistent security policies effectively and efficiently. Finally, it offers a lower total cost of ownership compared to multivendor approaches, primarily through operational simplicity and the lower cost licensing of included features.

### Products

Volterra's offerings are delivered in a SaaS model, including the collection of performance data, for use in public clouds, edge sites, or colocation and company-owned datacenters. Volterra's SaaS offerings are hosted in globally distributed network points of presence (PoPs), offering high-speed interconnect to major cloud providers, and it has its own private backbone between them, consisting of 2x100Gbps or 4x100Gbps interconnects. It's up to customers to provide last-mile connectivity from private datacenters, and colocation datacenters that are not co-resident with Volterra PoPs.

VoltMesh is a distributed connectivity and security service, interconnecting workloads wherever they reside. VoltMesh runs on physical or virtual appliances deployed in Volterra's points of presence, cloud service providers and/or customer edge premises that provide a variety of application services such as API gateways, service mesh, load balancing, firewall and observability. It uses Volterra's global backbone for transport and interconnection to cloud services.

VoltStack is a versatile suite of services – such as application management, clustering, distributed storage, managed Kubernetes and application security functions – that allows customers to distribute applications globally with minimal operational overhead. VoltStack includes VoltMesh, and the networking and application components can be used as needed by the enterprise, allowing for architectural flexibility. Volterra offers an operating system that can be run on bare metal, cloud or edge devices, providing a consistent deployment environment and reducing the negative impact of environmental diversity. Enterprises can also deploy their software into Volterra's PoPs, distributing workloads closer to end users.

VoltKit, which is not yet released as open source software, is a development framework that allows developers and DevOps teams to much more easily create microservices-based workloads independent of Volterra's services. In developing its own software, Volterra saw a gap in the microservices toolkits and created VoltKit. Components of VoltMesh will also be released as open source later this year. Successful open source software projects can be instrumental in raising awareness of the vendor and its products and services, in the minds of application developers, architects and DevOps professionals.

Volterra's pricing starts at \$50 per node per month for one user and up to five sites, and includes VoltMesh and VoltStack. The Teams package starts at \$200 per node per month for up to 25 users and sites, along with advanced support. Custom pricing for larger installations is also available. Further services like Volterra backbone, distributed storage and container security are additional.

### Financial

Volterra is a startup founded in September 2017. It emerged from stealth in November 2019, accumulating more than \$50m from investors such as Khosla Ventures, Mayfield, M12 (Microsoft's venture fund), Itochu Technology Ventures and Samsung NEXT. The company claims over 40 customers to date. Approximately 25% are global and 35% are in the \$500m to \$2bn revenue range. Volterra claims revenue doubled in the last six months.

Of its 100+ employees, 80% are in engineering, with the rest in go-to-market. The company has a good presence in the US, the EU (mainly in France), the UK and Spain, as well as Japan.

### Competition

We are not aware of any direct competitors that encompass Volterra's entire product and service suite, but that doesn't mean there are no rivals. The biggest is enterprises' existing cloud-native plans that encompass all of Volterra's capabilities, but are brought together DIY through organizational teams and the use of various cloud products and services. Some enterprises have already invested in IT products and strategies for multicloud management, and the cost of changing poses a hurdle to adoption.

Edge computing is still early, and competitors are fleshing out their product offerings, making Volterra early with an end-to-end software stack to manage and connect distributed workloads. Enterprises still in the beginning of their digital transformations are also not averse to pursuing their own strategies for similar reasons. From a product standpoint, cloud vendors like Microsoft and VMware have compelling service offerings for containers, virtual machines, content delivery networks and services if enterprises remain within their technology stacks.

The network automation segment, as we discussed in our report Enterprise network automation gets competitive, can also mitigate the benefits of Volterra's offering by providing relatively simple cross-vendor network automation, including WAN services paired with an orchestration strategy using one of the IT automation stacks.

Service providers and managed service providers are also in various stages of providing regional and worldwide distributed application services with many of the same capabilities Volterra offers, although few are currently as fully conceived and delivered as Volterra's. But it's a quickly evolving market, and MSPs have their own networks, interconnection, content delivery networks and application services readily available.

SWOT Analysis

**STRENGTHS**

It has a cloud-native focus, which infuses its product and service design, and operates its own backbone in addition to using other service provider networks via paid and settlement free peering, allowing it to control its fate. It offers flexible options for all facets of application distribution and management for multicloud connectivity and security and distributed app management.

**WEAKNESSES**

Market demand is not clearly defined, and currently only sophisticated enterprises will recognize the problems that Volterra is trying to solve. Not including last-mile connectivity will put it at a disadvantage against service providers that offer aggregation services or end-to-end connectivity.

**OPPORTUNITIES**

Volterra can fill gaps that vendors in the enterprise NFV segment have in supporting custom VMs and containers on-premises equipment. Removing onerous qualification steps for customer VMs and containers can accelerate adoption of distributed applications for all customers and channels.

**THREATS**

Volterra will face competition from single-vendor or integrated product suites that offer close-enough features and capabilities. As equipment vendors, software vendors and service providers expose APIs and foster integration, successful deployment scenarios will emerge, as well as managed services offerings that will directly compete with the company.