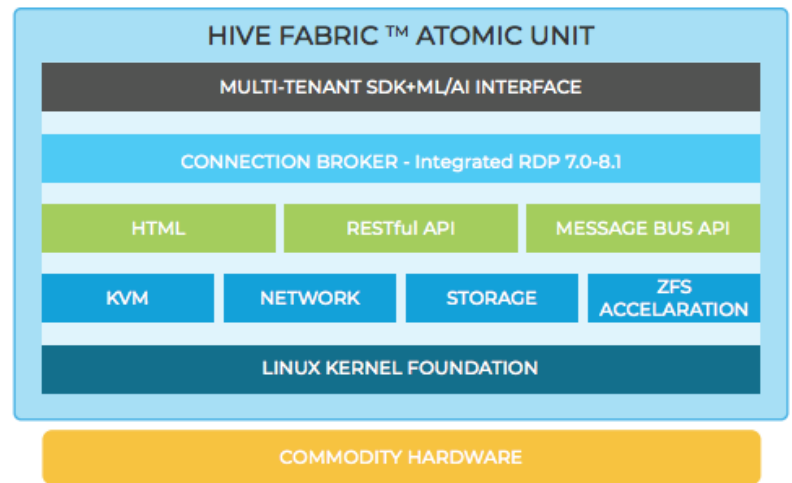# HIVE FABRIC™
Hyperconverged Fabric

HiveIO

Hive Fabric™: One Platform, Endless Possibilities

Hive Fabric brings to market an industry first all-in-one Software-Defined Data Center in an easy to deploy and manage platform. A simple, powerful, and ready solution that installs on a wide range of x86 commodity hardware allows customers to quickly and efficiently build out private clouds at significantly lower cost.

Hive Fabric caters to multiple verticals with diverse workload types including VDI, VSI, Grid Computing and Big Data. Provides a platform to run and manage a wide variety of applications and services. It is the simplest and most efficient way to replace expensive hardware, complex licensing and vendor bloat with streamlined, distributed management that will predictively scale and auto heal.

HIVE FABRIC ™ ATOMIC UNIT

| MULTI-TENANT SDK+ML/AI INTERFACE |
| CONNECTION BROKER - Integrated RDP 7.0-8.1 |
| HTML | RESTful API | MESSAGE BUS API |
| KVM | NETWORK | STORAGE | ZFS ACCELARATION |
| LINUX KERNEL FOUNDATION |

COMMODITY HARDWARE

Build your On-premise Cloud for Half the Cost

PaaS **Virtual Desktop** **Virtual Server** **Shared Storage**

Simplicity
Hive Fabric provides a simple to deploy and use Software-Defined Data Center platform including the hypervisor, management, VM broker, gateway, storage acceleration and orchestration. Eliminates the need for a multi-vendor strategy. This simple to operate platform is easy to pick up and provides a faster deployment time and results in significant OPEX savings.

Scalability
Adding new compute, storage and networking resources takes just seconds. Hive Fabric's unique message bus and distributed management capabilities enable the platform to scale up or out linearly. Just add resources or servers to grow the pool of resources available to upstream VMs and applications. Scaling of the platform is further enhanced by the inline performance monitoring and intelligent scheduling.

Flexibility
Hive Fabric can build a single cluster from a heterogeneous set of servers making it the ideal choice to maximize the ROI on existing x86 hardware in the data center. This coupled with a full REST API allows for easy integration and automation, further simplifying management across the data center.

Physical

Hive Fabric is a simple bare metal install. Deployed from ISO or PXE server supporting a wide range of x86 hardware. Designed to scale from a single server to hundreds of servers and beyond.

Hypervisor

Hive Fabric builds on the industry leading KVM hypervisor to virtualize and abstract the physical building blocks in the data center. With the lowest overhead of any hypervisor you can expect improved density while maintaining highly performant desktops and servers for the applications and end users consuming them. VMs can migrate around the cluster to balance resource utilization, protect against failure and simplify management.

- *General Server Virtualization* – Hive Fabric provides a highly capable, simple, and low maintenance platform for virtualizing the entire data center.
- *Big Data / NoSQL* – Applications that require high availability and low latency can now leverage a combination of in-memory and shared storage from a single platform.
- *Next generation application architecture* – Microservice architectures can run on Hive Fabric's scalable platform, these applications would traditionally be throttled by requirements for disk, memory or CPU. Hive Fabric can independently scale the resources required to meet the most demanding applications.

Shared Storage

Hive Fabric allows you to build resilient, highly available shared storage, from local storage drives in each server. This Hyperconverged storage can be used to store Guest VMs and User Volumes. Hyperconverged storage can be deployed at a fraction of the cost of traditional shared storage. Hive Fabric automatically manages the creation and presentation of the shared storage, further simplifying the data center. As more appliances are added to the cluster the storage layer scales appropriately.

Orchestration

The Connection Broker replaces third party solutions to manage and distribute desktop VMs to users providing dramatic cost savings. Tens of thousands of desktops can be managed in a single cluster being carved up into pools for geographic locations or business units as the admin desires. Each pool of VMs can have their own resource allocation and security policy applied for the users connecting to their VM. Personalization is saved through our implementation of User Volumes allowing settings and documents to seamlessly move between VMs.

Management

The Hive Fabric Message Bus and distributed orchestration remove the overhead of maintaining additional management infrastructure to manage the hypervisor. A REST API allows for easy extension and integration with third parties in a secure controlled manner. All of the functionality is available in a simple to use html5 interface. *Cluster Resource Scheduler (CRS)* delivers intelligent resource management for Hive Fabric, continually monitoring the resource utilization of a server based on CPU, Memory and Storage. CRS will migrate Guests between servers to maximize the utilization and spread the load evenly across the cluster. This results in an optimized infrastructure with less "over resourcing" required for "just in time" management. This automated management of the infrastructure maximizes the resource availability for Guests and Applications whilst cutting the OPEX cost associated with data center management.