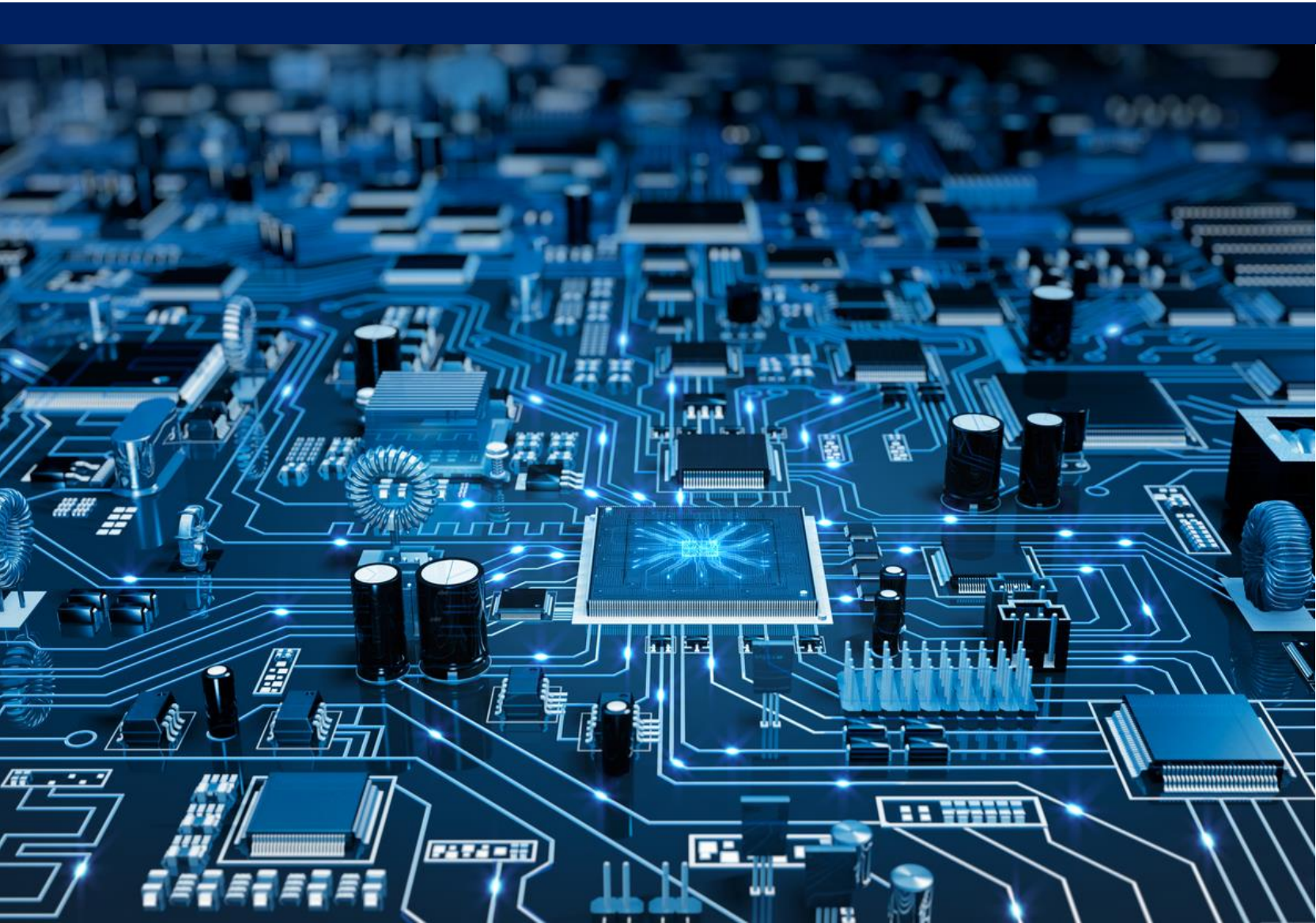




HTBASE

Composable Infrastructure

Transforming IT Infrastructure





Composable Infrastructure

A technology-based business strategy is an essential mandate for business to thrive in a digital economy.

In reality, next-generation applications will coexist with traditional and current-generation applications, as they both can be crucial in supporting the day-to-day revenue generating business operations.

So in the immediate future, IT departments have to manage a siloed and complex infrastructure, where deploying and managing two sets of applications will just add further complexity and slow the process of delivery of services and go-to-market strategies.

Why Composable Infrastructure

Having the opportunity to work with clients of different sizes, industries and countries, HTBASE found that nearly all datacenters have areas where efficiency can be improved and people, process and technology resources are poorly utilized, causing unnecessary effort and wastage.

Deploying and managing current-existing and next-generation applications require the business to embrace a new infrastructure model. Because of it, Composable Infrastructure plays an important role, where HTBASE's Composable Infrastructure Platform take key benefits of both, converged, hyperconverged and cloud infrastructure to a next level by operating on fluid compute, networking, and storage resource pools and is optimized for operations as well as applications.

HTBASE's Composable Infrastructure Platform help businesses to achieve the vision of an infrastructure-as-a-code.

Performing a survey with Business Leaders in the datacenter area, we found the following:

- ❑ **People efficiency:** A lot of the time spent by IT Administrators and staff today are spent in repetitive tasks such as provisioning and operations, and since most of them are manual tasks, it just causes inefficiency on the delivery of value to the business.
- ❑ **Process efficiency:** Enterprises lack value and speed when completing provisioning, monitoring and management tasks due to the lack of automation, which contributes to OPEX wastage.
- ❑ **Technology efficiency:** With a combination of overprovisioning and ongoing underutilization from a capacity and performance perspective, Enterprises face a lot of idle hours during which the infrastructure is not servicing any applications, which contributes to capex wastage. Another issue found across Enterprises is that not even half of their infrastructure is fully utilized, meaning that more than 50% is idle and unused and when there is a provisioning that needs to be made, there are silos, inefficiencies in the process, and time that it takes to provision compute and storage, or even make changes to existing instances.

Looking at the information collected above and others, HTBASE customers have found a transformation towards Composable Infrastructure rewarding, enabling the business to create value, improve customer experience, and increase operational efficiencies.

What is Composable Infrastructure

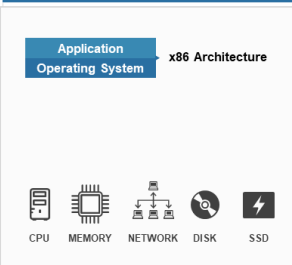
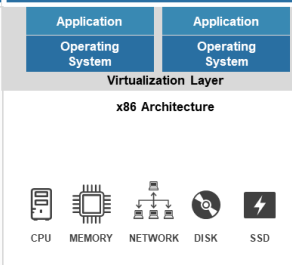
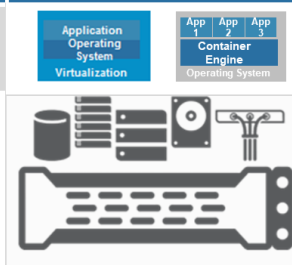
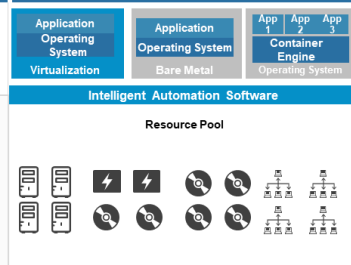








Composable Infrastructure is an emerging category in the datacenter infrastructure space that disaggregates compute, storage, and networking into shared pools that are made available for allocation on-demand, allowing rapid provisioning and seamless ongoing maintenance of resources.

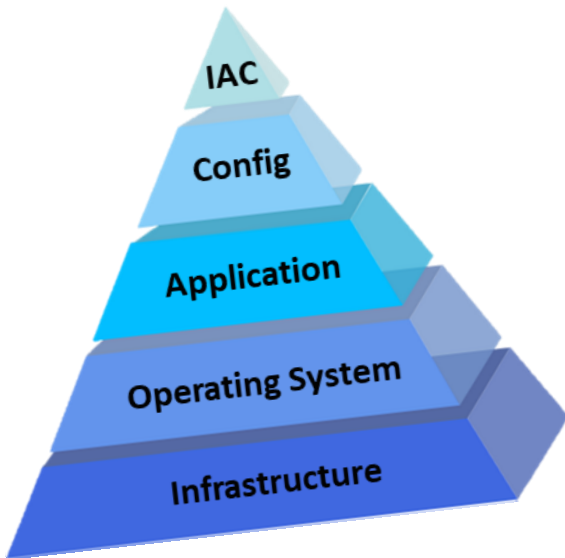
HTBASE and its Composable Infrastructure targets IT organizations that require a flexible and agile infrastructure to host current, traditional and next-generation applications. As a result, the Composable Infrastructure platform makes it easier for organizations to embrace a centralized and single infrastructure that addresses multiple requirements.

When looking at HTBASE's Composable Infrastructure platform, organizations find that:

- ❑ Having a Composable Infrastructure platform that is driven by software rather than hardware, like some of the current offerings, can significantly increase ROI, drive efficiency and ease the adoption
- ❑ Composable Infrastructure presents a significant leap forward when compared to Hyperconvergence, where the technology allowed IT organizations to move towards hardware disaggregation and an agnostic approach
- ❑ An open API allow Enterprises to integrate HTBASE's Composable Infrastructure with existing applications, building a centralized, integrated and automated platform instead of a "black box" that does not integrates with existing infrastructure like presented by many Hyperconvergence technology and vendors
- ❑ Automated deployment of applications across bare-metal, virtualized environments (supporting major hypervisors), which reduces effort and manual work required to deploy and manage applications across different environments
- ❑ True multi-cloud, where Composability happens between private and multiple public cloud vendors, abstracting all resources into a single shared pool, allowing organizations to break free from vendor locks, move unmodified workloads between clouds, build a high-available cloud environment and drastically reduce costs

Infrastructure Evolution

	TRADITIONAL ARCHITECTURE	VIRTUALIZED ARCHITECTURE	HYPERCONVERGED ARCHITECTURE	COMPOSABLE INFRASTRUCTURE ARCHITECTURE
Architecture				
Operating Expense				
Flexibility				
Characteristics	<ul style="list-style-type: none"> • Difficult to deploy and manage • Expensive to maintain • Underutilization of resources 	<ul style="list-style-type: none"> • Limited ability to pool resources • Separate Storage Management • No cloud integration 	<ul style="list-style-type: none"> • Proprietary • Expensive to scale • Suitable for generic applications 	<ul style="list-style-type: none"> • Hardware Agnostic • Flexible Scaling • True Multi-Cloud Integration • Suitable for all enterprise workloads



Organizations that are looking to transform its IT infrastructure are looking to present its infrastructure resources to be consumed as utilities, presenting the capability of support current and next-generation applications being developed and maintained in the organization.

Current-infrastructure applications many times present requirements such as to be run on bare-metal or on virtual machines and most often, present the necessity of being managed by dedicated IT resources. As an example of what can be considered current-infrastructure applications, many of HTBASE's customers are currently utilizing our Composable Infrastructure platform to support their Microsoft Exchange, Databases and Financial systems.

When looking at next-generation applications, requirements such as distributed file-systems, support to containers, and are often developed through methodologies such as DevOps, which requires the underlying infrastructure to be treated as code.

Composable Infrastructure and HTBASE enables the infrastructure-as-code approach and serves the crucial role of fulfilling purposes such as platform, value, automation and policy principles.

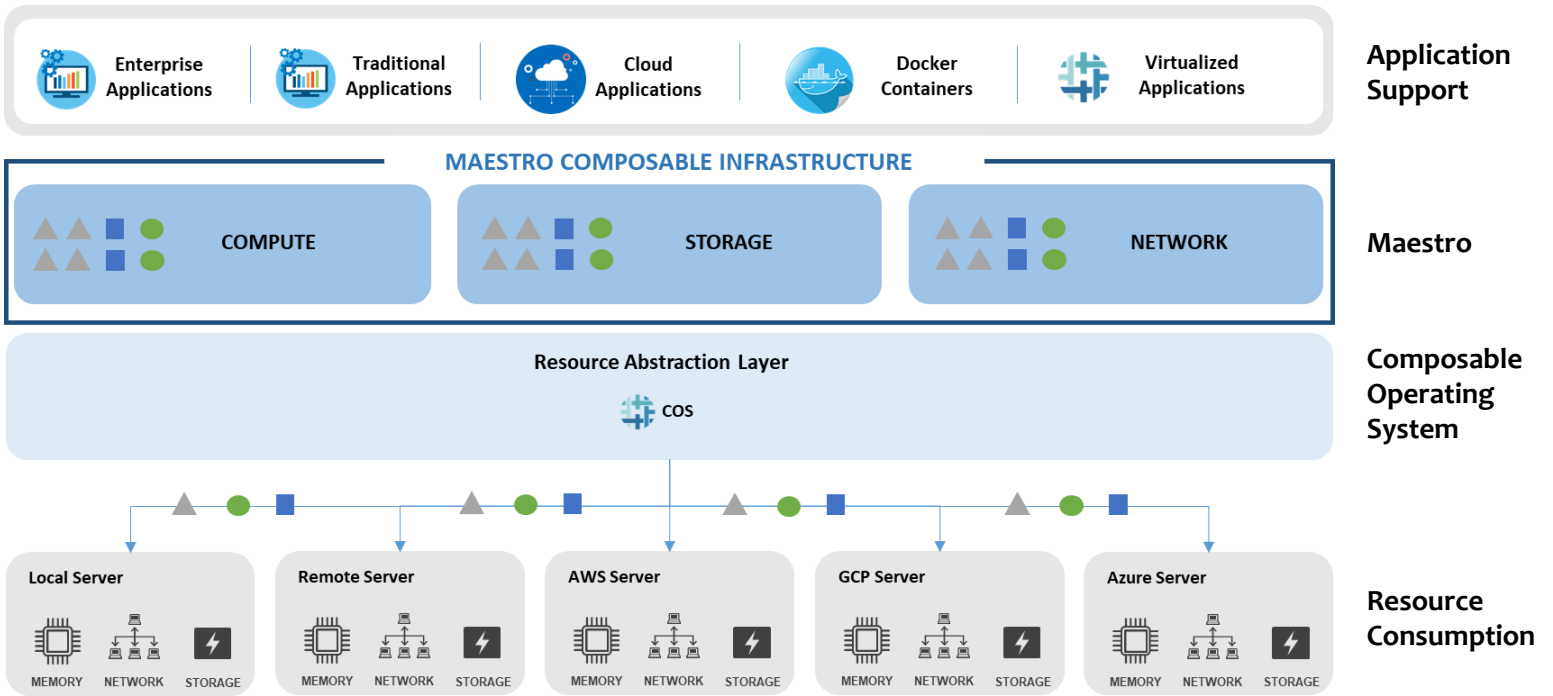
In order to address the requirements presented above, businesses have to embrace “composability”, which accelerates the delivery of a transformation in the IT organization, achieving benefits such as:

- IT staff productivity
- Improved utilization of compute resources
- Strong storage model that addresses both application requirements
- Single management across bare-metal, virtualized environment, containers and clouds
- Improved business agility

HTBASE's Approach to Composable Infrastructure

HTBASE introduced to the market the first Composable Operating System (COS), which changes the approach that some vendors have been taking to “composability”, which are driven by hardware instead of software. COS is hardware agnostic and can be deployed across new and existing hardware in the Enterprise.

COS is architected and design to bridge the gap and serve both, current and next-generation applications as well as a multi-cloud environment, serving the best of both worlds.



Application Support
Once assembled, applications can consume resources as required

Maestro
Once pulled by COS, Maestro brings all the resources together on a single platform and assembles it as required per the application

Composable Operating System
COS is deployed as an operating system image on top of x86 servers and is responsible for pulling the resources abstracted together

Resource Consumption
Resources are pulled from local, remote and public cloud servers, including x86 servers, storage appliances, HDDs/SSDs and more

COS brings all the Composable Infrastructure components together, such as open APIs, software-designed intelligence, fluid pool of resources and more, alongside a suite of products such as Maestro and Score that allows the “composition” of resources performed by the IT Administrator or End-Users, offering a multi-tenant approach to “composability”.

Through COS, organizations have achieved objectives that would be difficult – it not impossible – via traditional, converged, or even hyperconverged infrastructure solutions. For example, the ability to:

- Deploy current and next-generation applications quickly
- Easily scale and update current and next-generation applications
- Deploy, manage, monitor and run workloads anywhere, on physical servers, virtual servers, containers, and in the cloud
- Deliver detailed Quality-of-Service to any workload based on business requirements
- Deploy and operate any workload

As the next-generation of the IT infrastructure, COS extends key concepts from the architectures that have come before it, including converged and hyperconverged, addressing requirements and delivering functionalities and supporting the business on where deployment of those less inclusive architectures would not provide a complete and tightly integrated solution.

Additionally, organizations deploying COS see some of the following benefits:

- ❑ Efficiency goes up as COS reduces routine and repetitive operational tasks, freeing people for more strategic initiatives
- ❑ Reduction in processes and time required to provision workloads across private and public clouds as COS offers automated deployment of applications
- ❑ Technology efficiency and provisioning goes up as COS allows organizations to grow the infrastructure modularly and rightsized, removing silos, overprovisioning, and overspending caused by architectures such as Hyperconvergence
- ❑ Infrastructure gains agility and flexible scaling as resources such as Storage, Compute, and Networking can be added independently, utilizing local and public cloud resources as one
- ❑ Seamless migration of workloads between private and public clouds and between different public cloud vendors, drastically reducing the effort required, speeding up the release of applications, and removing vendor locking

About HTBASE

HTBASE is a technology solutions company dedicated to delivering radically simplified IT infrastructure that drives business agility in any enterprise. The company's flagship software-driven platform, *Maestro* Composable Infrastructure, compose compute, storage, and true multi-cloud (public and private) integration into a single solution. HTBASE drives the faster delivery of applications, and fuels agility, operational and expenditure efficiencies to give its customers in multiple industries around the world significant competitive edge.



To know more about HTBASE,
COS, and Composable
Infrastructure:



640 W. California Avenue,
Suite 210, Sunnyvale
CA - USA



contact@htbase.com
www.htbase.com



+1 (408) 585-9939