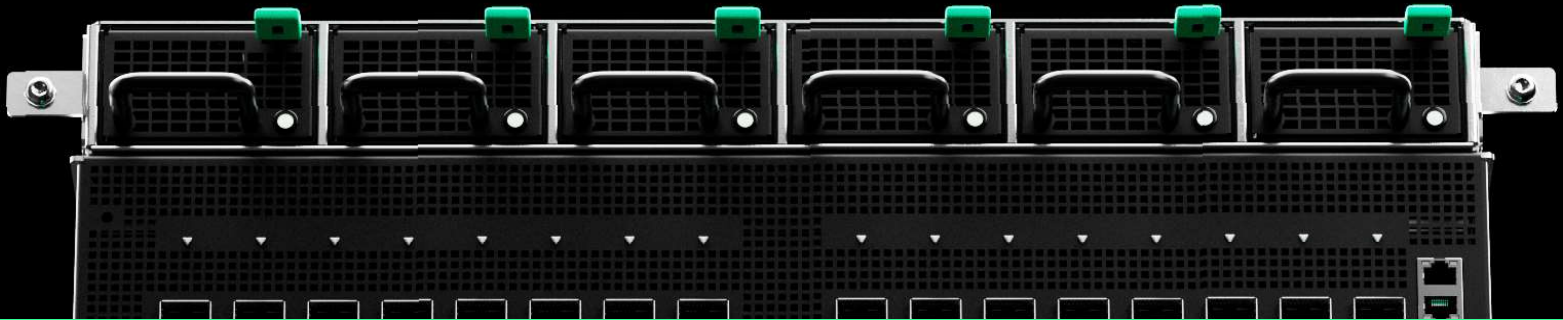


New Server Enables Enterprises to Deploy Hyperscale-Grade Cloud Infrastructure On-Premises and in Colocation

Oxide Computer Company transforms on-premises computing by combining networking, compute and storage capabilities with CoreSite's high density, network-rich data center solutions



The Challenge

Large enterprises have spent years adopting public cloud, moving workloads and resources to fit into a usage-based rental model. While many business benefits remain clear, the service-based, rent-only model has resulted in skyrocketing monthly cloud bills that are forcing enterprises to reevaluate how much of their IT footprint can actually run there. Additionally, many enterprises now realize that not all applications are well-suited to run in the public cloud, and IT security posture and compliance requirements are harder to achieve. Organizations recognize they need a more predictable cost model and decision-makers are asking to maintain control and ownership, while still having cloud-like capabilities.

When enterprises build their own full-stack systems, they face multiple obstacles: months-long setup time, disjointed products that hamper performance, reliability and efficiency as well as expensive software licensing. Also, systems aren't developer-friendly because the use of application programming interfaces (APIs) is limited or discouraged.

Public cloud hyperscalers operate on infrastructure designed at the rack- and data center-level, not the machine-level, delivering significant gains in density and energy efficiency. This type of infrastructure isn't available to other organizations to buy and use on-premises. What they can buy – commodity data center gear – doesn't allow them to own cloud computing at hyperscale. Oxide is blazing a new trail by creating a vertically integrated hardware and software platform: servers as they should be.

Oxide

INDUSTRY

Cloud Infrastructure
Computing Hardware and Software

ABOUT

Oxide Computer Company is the creator of the world's first commercial cloud computer, a true rack-scale system with fully unified hardware and software, purpose-built to deliver hyperscale cloud computing to on-premises data centers. With Oxide, enterprises can fully realize the economic and operational benefits of cloud ownership, with access to the same self-service development experience of public cloud, without the public cloud cost. Oxide empowers developers to build, run, and operate any application with enhanced security, latency, and control, and frees enterprises to up-level IT operations to accelerate strategic initiatives.

HEADQUARTERS

Emeryville, CA

YEAR FOUNDED

2019

WEBSITE

www.oxide.computer

CORESITE AVAILABILITY

Silicon Valley 2 data center

CORESITE SOLUTION

Colocation with Blended IP

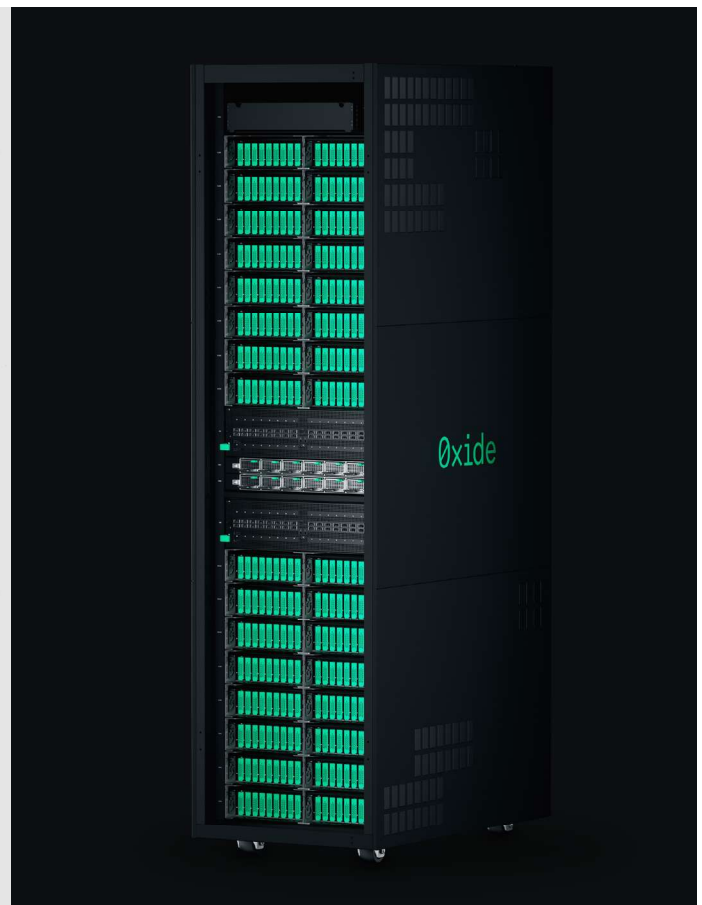
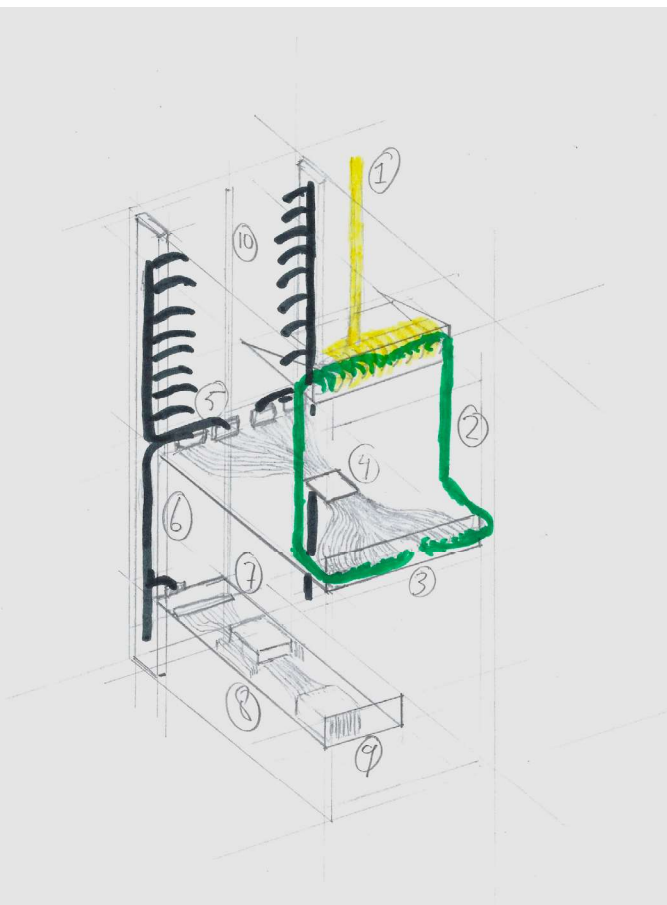
The Solution

Oxide's secure, open-by-design system has unified hardware and software as well as end-to-end observability. The rack-level system consists of 32 Oxide compute sleds and highly available Oxide-designed switches, with a power shelf in the middle. All components are integrated into a cabled backplane, which simplifies maintenance and upgrades. According to Bryan Cantrill, Co-Founder and Chief Technology Officer at Oxide, this true cloud computer comes with everything needed to run a cloud, including per-tenant isolation, self-service networking as needed, elastic compute capacity and high-performance, non-volatile memory express persistent block storage service features.

By colocating in a CoreSite facility, Oxide can demonstrate the full power, efficiency and potential of its system. Oxide chose CoreSite's Silicon Valley data center (SV2) in Milpitas, California for colocation services and support with product demonstrations.

CoreSite's N+1 power and mechanical redundancies, 24x7x365 operational support and physical security provide the reliability that Oxide customers demand. CoreSite's network-dense data centers and Blended IP service facilitate the network performance and flexibility essential to modern data volume transport and quick setup. Additionally, Oxide can access hundreds of cloud, network and IT providers as well as enterprises by colocating at CoreSite. SV2 also features multiple layers of security, with biometric access controls, perimeter and internal IP-DVR, and meets key compliance standards and regulations, including SOC 1 Type 2, SOC 2 Type 2, ISO 27001, NIST 800-53, PCI DSS and HIPAA.

The Oxide Cloud Computer went from a napkin drawing to a fully integrated, quiet, efficient, cloud-ready rack in about three years.



The Outcomes



APIs ENABLE IT MODERNIZATION, FLEXIBILITY AND AGILITY

APIs connect functions and people, including customers, suppliers and partners. A core aspect of modernization strategies, APIs enable data sharing, system integration and creation of new products and services in a flexible, agile, scalable way. The Oxide cloud computer provides excellent API support, so developers and users can launch projects within minutes using familiar tools.



HARDWARE AND SOFTWARE ARCHITECTED TOGETHER SIMPLIFIES EVERYTHING

Organizations that choose traditional racks buy each component separately. This involves a significant amount of shopping, many decisions and challenging integration – all of which takes time away from running the business. The cycle is repeated every few years. The Oxide system is built with the hardware and software needed to be up and running quickly. Far fewer Oxide cabinets provide comparable or better density, power and efficiency than traditional racks, with a true cloud-like approach. Enterprises can easily deploy their software on top of Oxide's solution to seamlessly expand beyond public cloud.



SYSTEM INTEGRATION RESULTS IN EFFICIENCY GAINS

The Oxide system is at least 35% more efficient than a traditional rack equipped with AC power supplies in each server. The efficiency gains are enabled by different fan geometry, a DC bus bar to convert power in one part of the rack, and DC power running up and down the rack – the hyperscaler approach.



A STRONG PARTNERSHIP IS BUILT ON SHARED VALUES AND A COMMON PHILOSOPHY

The notion of a high-quality connected experience is fundamental to a hybrid world in which organizations operate in the public cloud, on-premises and in colocation. Both Oxide and CoreSite strongly believe these environments are no longer mutually exclusive. CoreSite productizes all elements that go into having dedicated business computers – strategy, real estate, networking, power, security, easy access to public cloud providers and redundancy.

“CoreSite and Oxide share the vision that the world is not going to be strictly a public cloud computing world, and customers should not have to sacrifice the advantages of cloud when choosing to own their compute. We’re very excited about the core infrastructural approach that CoreSite has taken in anticipation of hybrid IT becoming the norm, and working together, we will deliver high-quality connected experiences to our customers. The Oxide-CoreSite relationship enables enterprises to now benefit from the capabilities of cloud computing everywhere, without compromising on the cost and control they require.”

**STEVE TUCK, FOUNDER AND CEO,
OXIDE COMPUTER COMPANY**

**Find out more.
Click. Call. Write.**



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