FlexPod for a more sustainable data center Solution brief

Data center sustainability starts with Cisco and NetApp

Data center sustainability has become a crucial priority for organizations worldwide. As data centers consume significant resources, including energy, real estate, and personnel hours, it's no wonder that a majority of organizations are expected to implement data center infrastructure sustainability programs. The FlexPod® sustainability white paper highlights the need for sustainable data center designs that deliver optimal performance while minimizing environmental impact and operational costs. FlexPod, a collaborative solution by NetApp and Cisco, is positioned as a key enabler of sustainable data center operations.

FlexPod sustainability features

FlexPod offers a comprehensive suite of sustainability features that are designed to enhance the efficiency of data centers and to reduce their environmental footprint. The solution integrates advanced technologies from NetApp and Cisco, such as energy-efficient storage systems and servers, workload consolidation, and automated data tiering. NetApp® ONTAP® software provides storage efficiencies through deduplication, compression, and thin provisioning, significantly reducing physical storage requirements. In addition, Cisco UCS X-Series servers support future innovations like liquid cooling and energy-efficient CPUs, further enhancing sustainability. These features collectively contribute to lower energy consumption, reduced

4-to-1
Compute consolidation

4-to-1
Storage efficiency

greenhouse gas emissions, and optimized resource utilization.

Long-term sustainability and future-readiness

Preparing for long-term sustainability is a core focus of the FlexPod solution. By adopting adaptable technologies, organizations can avoid disruptive and costly upgrades, keeping their data centers future-ready. The white paper emphasizes how the FlexPod design, which includes reduced energy consumption and extended hardware lifespans, supports long-term environmental objectives. Cisco UCS X-Series minimizes complexity and supports future innovations, while NetApp storage solutions offer automated tiering and efficiency optimizations. With this forward-looking approach, FlexPod remains a sustainable
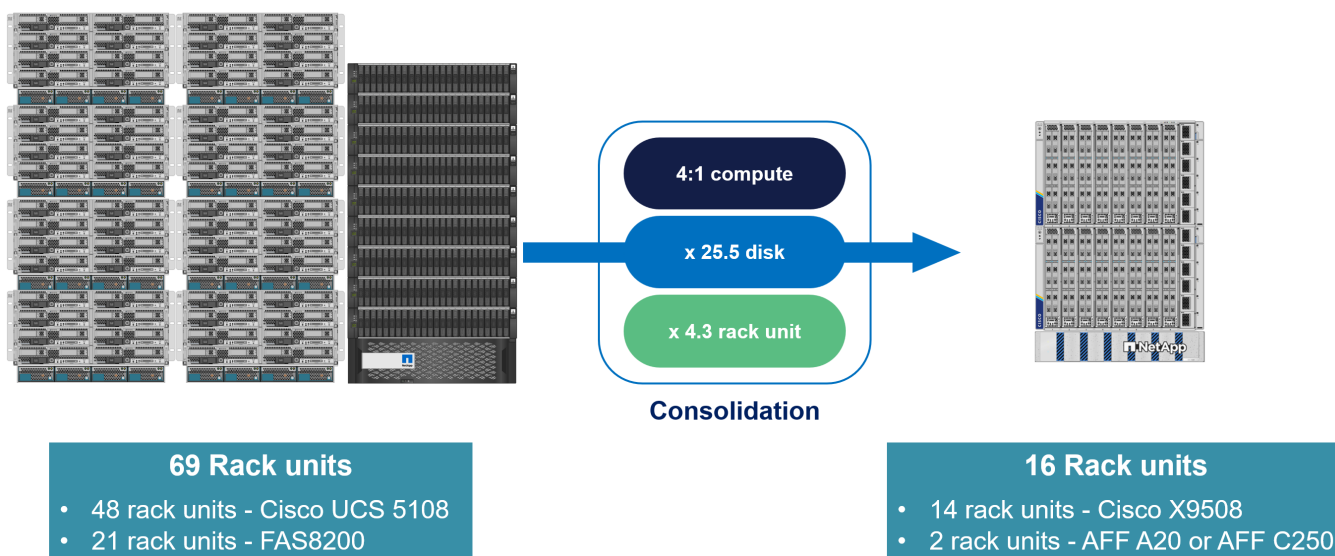
investment that aligns with evolving environmental standards and business needs.

Real-world impact and efficiency

The FlexPod sustainability white paper provides concrete examples of how FlexPod configurations have achieved sustainability and efficiency gains through generational improvements. As a real-world example, a comparison between the NetApp FAS8200 hybrid flash system and the AFF A20 and AFF C250 all-flash systems demonstrates substantial reductions in disk usage and rack space. The UCS X-Series servers in the example also offer significant energy efficiency benefits through server consolidation, reducing power and cooling requirements. These improvements not only lower operational costs but also

contribute to a smaller data center footprint. With 4-to-1 compute consolidation when moving from Cisco UCS M4 to M7 compute nodes, and 4-to-1 data reduction with NetApp® AFF systems, FlexPod helps organizations achieve their sustainability goals while maintaining high performance and scalability.

For more information, check out the white paper in its entirety.

Consolidation

4:1 compute

x 25.5 disk

x 4.3 rack unit

69 Rack units
- 48 rack units - Cisco UCS 5108
- 21 rack units - FAS8200

16 Rack units
- 14 rack units - Cisco X9508
- 2 rack units - AFF A20 or AFF C250

FlexPod®   cisco   NetApp