

# SAN-Optimized FlexPod with All Flash SAN Storage (ASA) Solution Brief



## FlexPod with NetApp ASA: Ready for whatever comes next

In an ever-changing industry, the FlexPod® platform remains a pillar in the hybrid cloud world. Cisco and NetApp have maintained a partnership over the past 15 years to work toward becoming the gold standard for enterprise workloads. While trends have come and gone over that time, FlexPod has adapted and evolved. The FlexPod team has been hard at work to prepare the all-flash SAN array approach as we reach this crucial juncture in tech.

When integrated with FlexPod, NetApp® ASA all-flash SAN storage creates a SAN-optimized solution that delivers industry-leading performance. This combination provides businesses with a resilient, high-performance, fully redundant, full-stack, and scalable solution that can handle a wide range of workloads.

## TCO savings start on day 0

NetApp ASA stands out as the smart choice for FlexPod. With NetApp ONTAP® One licensing, NetApp ASA offers a complete feature set without the need to piecemeal a solution. The license is perpetual, enabling long-term access to everything ASA has to offer without having to purchase add-on packages for missing features. NetApp ASA excels in SAN storage multiprotocol support, pioneering NVMe over Fabrics (NVMe-oF) virtual volumes with FC technology, as well as end-to-end 100GbE and NVMe/TCP support.

To simplify the deployment and management of ASA, NetApp [ONTAP tools for VMware vSphere](#) enables one-click configuration of path selection best practices, eliminating the need to manually configure multipathing settings for each host. The ONTAP tools collection provides dashboards to easily

monitor storage usage, performance, and latency, and it proactively monitors for errors and misconfigurations to provide an optimal experience.

The combination of FlexPod with NetApp ASA all-flash SAN arrays provides customers and partners with a prevalidated and tested solution for mission-critical applications. Like our other FlexPod designs, FlexPod with ASA features full-stack redundancy. For example, our [Oracle Database 21c Cisco Validated Design](#) uses NVMe/FC and demonstrates performance through fault-tolerance testing, including switch, compute node, storage controller, and link failure scenarios.

## Reduced infrastructure overhead

FlexPod with Cisco UCS X-Series servers and NetApp ASA storage is at the forefront of sustainable IT infrastructure, offering a [storage Efficiency Guarantee of up to 4:1](#) through always-on

deduplication and compression. This efficiency is matched by the Cisco UCS compute platform, which achieves [up to 4:1 compute density over previous generations of Cisco servers](#).

The consolidation benefits of this solution lead to significant energy savings thanks to fewer nodes and reduced rack space, coupled with the inherent energy efficiency of NetApp ASA.

NetApp ASA consumes up to [70% less energy](#) than traditional spinning disk arrays, owing to lower power requirements and diminished cooling demands. Moreover, the ability to scale compute and storage independently, both up and out, allows businesses to adapt to changing needs without compromising on sustainability goals.

## Best-in-class ransomware protection

FlexPod with ASA exemplifies a secure-by-design philosophy, as outlined by the [Zero Trust Framework Design Guide](#), offering a comprehensive defense-in-depth strategy across its entire stack. From the initial best practices for [FlexPod infrastructure hardening](#) across the FlexPod stack—virtualization, Cisco UCS, Cisco Nexus, and NetApp ONTAP systems—to advanced [ransomware protection and detection with NetApp Cloud](#)

[Insights](#) and [reliable applications and VMware recovery with NetApp SnapCenter® technology](#),

FlexPod maintains robust security. In addition, its secure multitenancy capability enables the coexistence of multiple tenants on the same infrastructure, with stringent logical data and application separation, providing peace of mind in a shared but secure environment.

The FlexPod with ASA NVA is backed by NetApp's best-in-class [Ransomware Recovery Guarantee](#). Immutable data copies, NetApp Snapshot™ based recovery, multi-admin verification, and multifactor authentication are designed to protect workloads from unwanted changes and to prevent stolen credentials from making such changes. Whether it's file or block storage, NetApp has your back.



## Learn More

- [netapp.com/flexpod](https://netapp.com/flexpod)
- [cisco.com/go/flexpod](https://cisco.com/go/flexpod)
- Read about [NetApp ASA storage performance](#)
- Read about [Cisco UCS X-Series servers](#)
- Read the [NetApp Verified Architecture](#)

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