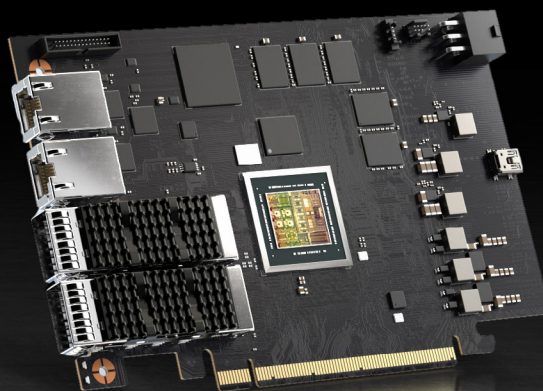# NVIDIA BlueField Enterprise Software (BES)

VMware vSphere Powered by the NVIDIA BlueField DPU

VMware vSphere 8 on NVIDIA® BlueField® DPU is the next step in the evolution of cloud infrastructure for modern applications, in which the responsibility for running infrastructure services is distributed between the CPU and the DPU. It offloads networking functions from the CPU and accelerates them on the DPU for better infrastructure performance and increased data throughput.

vSphere on BlueField DPUs unlocks hardware innovation to help customers meet the throughput and latency needs of modern distributed workloads. vSphere enables this by offloading and accelerating network and security infrastructure functions from CPUs to BlueField DPUs.

BlueField Enterprise Software (BES) Subscription Overview

NVIDIA BlueField includes a five-year subscription to BlueField Enterprise Software (BES), which includes business-standard support.

Support is offered for five years from the date of purchase, plus a 90-day grace period. You may purchase a new BES subscription at the end of the five-year term and no renewals are required.

Customers will self-register to obtain their license using the **BES Activation Portal**. To register, please follow the process as described in the online activation portal.

BlueField Enterprise Support

Business-standard support includes technical support access from 8:00 a.m. to 5:00 p.m. local business hours and a four-hour initial case response.

> Access to NVIDIA DPU experts

> Priority notifications

> Expert hotline and support portal

> Standard service-level agreement

Business Critical Support (24x7) is not currently available.

BlueField DPU Software

> Lifecycle Management (LCM)

> Accelerated networking

> Secure isolation

> DPU forward and backward capability

> NVIDIA Magnum IO optimizations

> Access to major/minor releases and security patches

Support Services

> Business-standard support

> Remote help-desk support

> Direct access to NVIDIA support engineering

> Live agent support available during standard local business hours

> Global delivery coverage

Educational Services

> Education related to NVIDIA's enterprise-wide solutions and adjacent topics

> Expansive catalog of deep learning and accelerated networking courses

BES Subscription Includes the Following Benefits:

> **DPU Virtualized Support for VMware vSphere**

You can use vSphere on BlueField to provide virtualized network offload acceleration to drastically improve the performance of your virtualized workloads.

> **DPU Pass Through Support**

Universal Pass Through (UPTv2) support enables your workloads to communicate directly with the BlueField hardware to access higher performance without sacrificing portability and reliability.

> **Secure Infrastructure Offload Support**

NVIDIA BlueField enables the hardware offload of VMware NSX-T, ensuring that your applications can be secured while returning compute cycles to your applications.

> **Network Visibility and Lifecycle Management Using VMware vSphere**

Adding BlueField DPUs into your VMware infrastructure is easy and uses all of the management utilities you're used to in vCenter. All management, lifecycle, and observability of the BlueField are inside of vCenter and is automatically managed alongside your virtualization hosts. There's no need to manage the DPUs separately of their respective hosts, meaning all lifecycle events such as firmware upgrades, ESXi upgrade, maintenance mode, and more can all be done without additional complication. vSphere Lifecycle Manager has been completely redesigned to allow for end-to-end management of your entire vSphere environment, including vSphere on BlueField.

> **Live Migration Support for Accelerated Workloads**

Using VMware Universal Pass Through (UPTv2), customers can access the accelerated performance of the DPU hardware without the limitations of PCI Passthrough. UPTv2 lets you continue to use key features of vSphere, including DRS, HA, vMotion, and more.

> **Access to All Major/Minor Releases and Security Patches**

BES entitles customers to all major and minor software releases, as well as ongoing security patches.

> **NVIDIA Magnum I/O Support**

NVIDIA Magnum IO™ is the architecture for parallel, intelligent data center IO. It maximizes storage, network, and multi-node, multi-GPU communications for the world's most important applications, using large language models, recommender systems, imaging, simulation, and scientific research. Magnum IO provides the foundation of GPUDirect for accelerated networking to GPU centric workloads. Magnum IO's communication libraries rely on the GPUDirect RDMA capabilities of the BlueField DPU.

Learn more

To learn more about BlueField Enterprise Software visit: **nvidia.com/activate-bes**