

Compute Platforms for AI

Unit 7 - Summary

- **NVIDIA Platform:** NVIDIA offers a full stack platform for accelerated computing in the modern data center.
- **Data Center GPUs:** NVIDIA offers a range of data center GPUs, including the B200, H100, and L40S, based on the Blackwell, Hopper, and Ada Lovelace architectures.
- **Multi-GPU Systems:** NVIDIA offers multi-GPU systems, including the DGX H100 and DGX B200, with high-bandwidth inter-GPU communication via NVLink and NVSwitch.
- **BlueField Platform and DOCA:** NVIDIA offers BlueField Data Processing Units (DPUs) and BlueField SuperNICs with the DOCA software framework to offload, accelerate, and isolate infrastructure processing.
- **NVIDIA-Certified Systems:** NVIDIA-Certified Systems simplify the deployment of accelerated computing at scale, with key features including performance, security, and scalability.

What are the key components and features of the NVIDIA data center platform?

The NVIDIA data center platform includes a full stack platform for accelerated computing, with accelerated computing services, software, and systems for the modern data center.

What are the GPU and CPU requirements for AI data centers?

NVIDIA offers a range of data center GPUs, including the B200, H100, and L40S, based on the Blackwell, Hopper, and Ada Lovelace architectures. The Grace CPU is built on Arm architecture and is designed for high-performance computing (HPC) applications, cloud, and hyperscale data centers.

What is the purpose and capabilities of multi-GPU systems?

Multi-GPU systems allow for near-linear performance scaling and require high-bandwidth inter-GPU communications. NVIDIA NVLink-C2C interconnect allows GPUs to communicate between themselves at incredibly high speeds.

What is the role of BlueField Platform and DOCA in an AI data center?

BlueField Platform offloads, accelerates, and isolates infrastructure processing. DOCA is a unified software framework for BlueField Platform that supports hyperscale, enterprise, supercomputing, and hyperconverged infrastructure.

What are the benefits of using NVIDIA-Certified Systems?

NVIDIA-Certified Systems simplify the deployment of accelerated computing at scale, with key features including performance, security, and scalability.