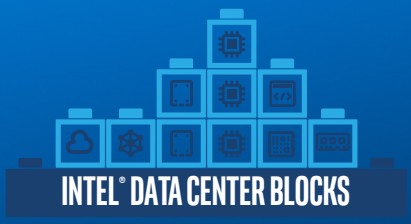
FREQUENTLY ASKED QUESTIONS ABOUT INFRASTRUCTURE DEPLOYMENT AND INTEL® DATA CENTER BLOCKS



1) What's the difference between a private cloud and a public cloud?

Public cloud is what most people think of when they think of cloud. A typical public cloud enables you to quickly deploy workloads on infrastructure that you do not own or manage, and that exists off-premises. Public clouds are multi-tenant, meaning any company can deploy workloads on the cloud, and those workloads share cloud resources with other workloads. Most public clouds charge customers based on resource utilization time—much like how customers are charged for electricity, water and other utilities.

A private cloud is similar in some respects to a public cloud. Workloads can be deployed quickly. And deployed workloads share cloud resources. But they differ in that they are generally single tenant and located on-premises.

Many companies today have moved or are planning to move to a hybrid cloud or multi-cloud strategy. This enables a number of advantages, such as offering the virtually unlimited scalability of public cloud with the visibility and control you get from a private cloud.

2) What advantages can a private cloud provide to my company?

There are many advantages to deploying an on-premises private cloud. There are private cloud advantages versus a traditional data center infrastructure and private cloud advantages versus a public cloud.

When compared to a traditional data center, private cloud enables new workloads to be deployed in as little as minutes versus workload deployments that can often take weeks for a traditional data center. Clouds are automated and simpler to manage and scale. They utilize resources more fully and efficiently, helping to reduce capital and operating expenses.

Private clouds can also provide more visibility and control versus public clouds. They are ideal for sensitive data that must remain on-premises because of risk or regulatory compliance. There is also the concept of "data gravity," where large databases and high volumes of data reside on-premises, and workloads that need to access that data are performance sensitive, necessitating those workloads to also be located on-premises, nearer to the data.

It's important to understand that these advantages don't mean there aren't benefits to private cloud. It just means you need to evaluate each workload to best determine where it should reside.

3) What is High-Performance Computing (HPC) and an HPC infrastructure?

HPC is a specialized infrastructure optimized to run massively parallel processing workloads, such as analytics, artificial intelligence (AI), machine learning and deep learning.

An HPC infrastructure is comprised of many server nodes interconnected over a high-speed fabric. The infrastructure generally integrates high memory capacity and low latency storage so data can be transmitted to fuel the processors across the infrastructure.

4) What benefits can a High-Performance Computing (HPC) infrastructure provide to my company?

The value of an HPC infrastructure comes from the advanced, insight-driven workloads you can run on it, such as analytics, AI, machine learning and deep learning. These compute-intensive and data-intensive workloads help organizations discover intelligence and actionable insight from large volumes of data.

HPC infrastructures can enable clinicians to optimize treatments for cancer and other diseases, automotive manufacturers to create driving policies to make autonomous vehicles safe, retailers to learn more about their customers to enhance their shopping experiences, scientists to make breakthrough discoveries in cosmology, particle physics, weather forecasting and more.

Organizations across every industry are using HPC to gain competitive advantage, streamline operations, reduce costs and improve customer interactions.

5) What is Network Functions Virtualization (NFV)?

NFV enables networking services that are traditionally provided by proprietary, fixed-function network appliances to be provided by virtualized applications running on industry-standard, commercial, off-the-shelf servers.

The virtualized network functions (VNFs) running on these servers can replace appliances such as routers, firewalls, VPNs, intrusion prevention, load balancing and more.

6) What benefits can Network Functions Virtualization (NFV) provide to my company?

NFV has many benefits. Companies can reduce capital expenses, operating expenses and data center sprawl because they can reduce the number of hardware components and better utilize the server components running the virtualized network functions (VNFs). Service scalability is also improved, as individual network services can be quickly scaled up or down to meet ever-changing demands. Manageability is improved because there are fewer components to manage and those components are based on a common architecture, enabling components to be easily swapped or added as needed.

7) What are the advantages of Intel® Data Center Blocks?

Deploying modern infrastructure is complex, requiring a great deal of time and expertise. IT must identify, purchase, configure, test, optimize, validate and deploy the infrastructure and ensure that infrastructure is scalable.

Intel® Data Center Blocks can greatly reduce the complexity, time and expertise required to deploy modern infrastructure.

Solutions include Intel® Data Center Blocks for Cloud, Intel® Data Center Blocks for HPC and Intel® Data Center Blocks for Networking.

Each solution is workload optimized to maximize performance. Intel® Data Center Blocks are preconfigured with the essential hardware and software components, which are pre-validated to accelerate time to deployment and time to value.

8) What are the key technologies that comprise Intel® Data Center Blocks?

Intel® Data Center Blocks combine leading technology innovations that are pre-validated and purpose-built for modern workloads.

Some of the key, differentiating components include:

Intel® Xeon® Scalable Processors
Combine outstanding per-core performance across a variety of workloads with hardware-based security enhancements to help better protect servers and data.

Intel® Server Boards and Chassis
Purpose-built from the ground up.

Intel® Data Center SSD Family
Delivers outstanding storage performance for today's data-intensive workloads.

Intel® Ethernet Network Adapters
Provide highly-reliable, high-bandwidth connectivity between data center components.

Intel® Omni-Path Architecture
A high-throughput fabric that accelerates data I/O across server nodes in HPC infrastructures.

Intel® QuickAssist Technology
Accelerates network tasks—such as encryption and compression—for networking needs, while freeing processors to focus on critical business workloads.

Workload-Optimized Software
Industry-leading, foundational software components designed to enable key capabilities for cloud, HPC and networking infrastructure with an Intel® Select Ready Data Center Block as a preconfigured platform or customized to meet your needs

Other Hardware Components
Other pre-validated, key Intel® Data Center Blocks components include third party memory.

9) Are Intel® Data Center Blocks preconfigured or customized based on needs?

Both. There are Intel® Data Center Blocks that come preconfigured for specific workloads. But you can also choose a build-to-order option.

Build-to-order enables you to customize Intel® Data Center Blocks with components that best fit your needs. And Intel still makes it simple, with an easy-to-use, Configure To Order (CTO) tool that helps you through the process.

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