

Accelerate high-performance computing with fast file access using Azure HPC Cache

Rising compute demand can quickly strain storage resources, bringing performance-demanding workloads to a halt. For many organizations, the scale and capacity of the cloud makes it an ideal solution. But taking advantage of cloud power requires overcoming obstacles to accessing your file-based datasets. Azure HPC Cache does exactly that, making it easy to run file-based workloads using either Azure storage resources or your on-premises network-attached storage (NAS).

Hybrid file access for on-demand performance

Businesses with commercial high-performance computing (HPC) workloads recognize the power of the cloud to relieve strained on-premises infrastructure. But traditionally, moving applications to the cloud meant rewriting them for file access. Azure HPC Cache lets you run the most demanding workloads in Azure without the time and cost of rewriting applications and while storing your data where you want to—in Azure or on your on-premises storage. The Azure HPC cache minimizes latency between compute and storage to deliver essential high-speed data access.

Build efficient cloud HPC with Azure

Azure makes HPC in the cloud easy. Access to HPC Cache is available directly from the Azure Portal. Simply select your cache size and throughput, and you're ready to go with speeds of up to 8 GB per second and scale up to 10,000 cores. HPC Cache also includes an aggregated namespace that gives you valuable insight and access into your storage resources directly from the portal.

On-demand file performance

Use Azure HPC Cache to run high-performance workloads with low latency and on-demand scale. Azure HPC Cache gives you:

- Single-pane visibility into storage resources with simplified management tools and an aggregated namespace that enables a single, logical mount point
- Easy set-up and management of cache directly from the Azure Portal
- Flexibility to store datasets where you want them—in Azure Blob or on-premises NAS
- Speed and scale out—gain performance of up to 8GB per second and scale up to 10,000 cores

Azure HPC Cache is optimized for:

- Scalability and capacity with clustering
- NFSv3
- Read-heavy workloads like rendering, research computing, reservoir simulations, financial simulations, and EDA tooling

Using HPC Cache with other key Azure services like Azure Virtual Machines, Azure Batch, Azure CycleCloud, Azure NetApp Files, Azure ExpressRoute, and Azure Blob gives you flexibility and manageability simply not possible with traditional infrastructure.



Azure Virtual Machines



Azure CycleCloud



Azure Batch



Azure NetApp Files



Azure ExpressRoute



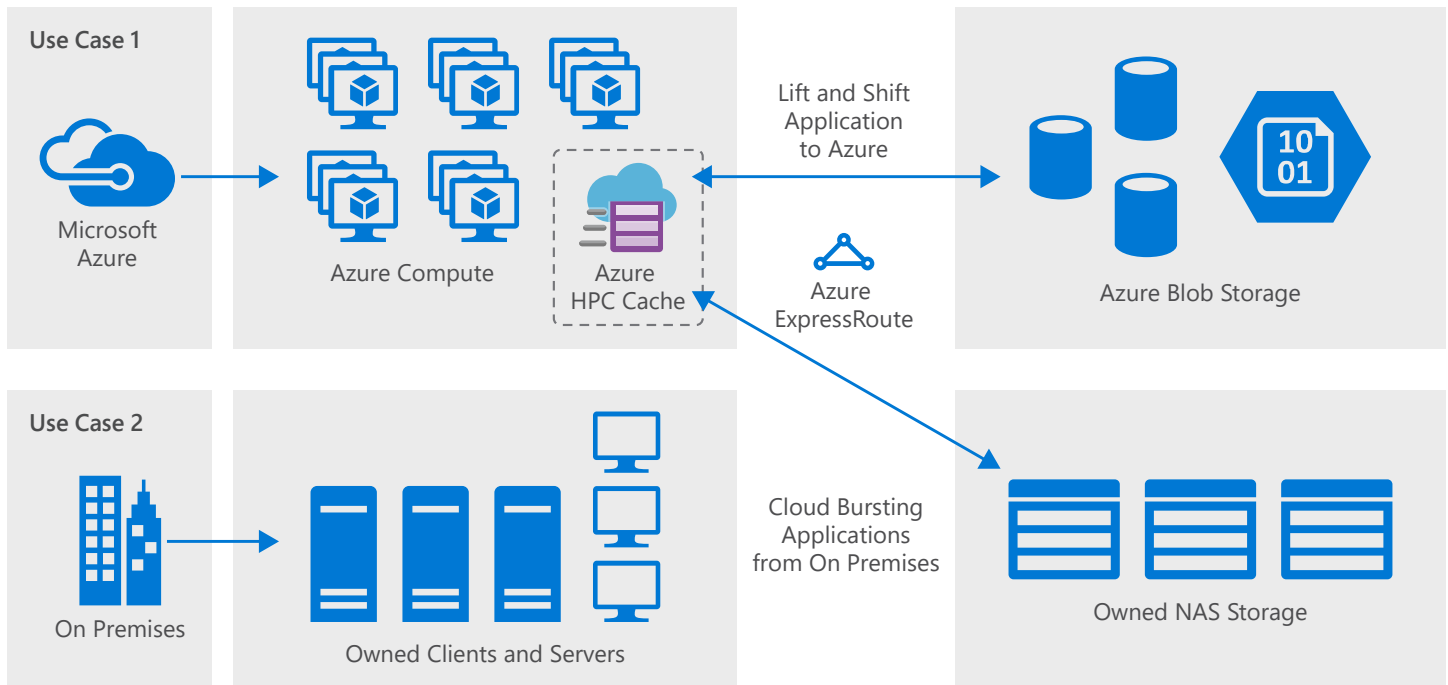
Azure Blob

Use Case 1 Stop data center gridlock

HPC Cache can help organizations slash capital expenditures and minimize footprints dedicated to support functions like computing. Azure and Azure HPC Cache lets you take advantage of cloud flexibility to run file-based high-performance workloads that were traditionally locked to the data center. And you don't have to worry about costly application rewrites.

How it works

1. Move data to Azure Blob Storage
2. Run workloads in Azure using Azure HPC Cache as a NAS front end.



Use Case 2 Handle peaks in compute demand with ease

Use Azure HPC Cache to “burst” workloads to Azure directly from the Azure portal. Your data remains in your on-premises NAS, while active data is processed as needed by Azure Virtual Machines.

How it works

1. HPC workload compute nodes request data
2. Azure HPC Cache cluster pulls the active data over the network and caches the data on high-speed media in Azure while the job completes.

Get started today. Learn how at aka.ms/AzureHPCCache.