Using Azure in a high-performance computing

Environment

Azure’s A8, A9, A10, and A11 virtual machine (VM) sizes are tailored specifically for HPC

Workloads.

A10 and A11 instances are designed for so-called *parametric*, or *embarrassingly parallel*, applications that don’t require constant, low-latency communication among nodes.

Another way that Azure handles HPC environments is through its support for Intel MPI Library.

# Constructing an HPC cluster

An HPC cluster comprises a head node and a number of compute nodes. The head node is responsible for managing the cluster, and the compute nodes run compute jobs.

In addition to the A-series servers just mentioned, Azure also provides

1. D-series with SSD temporary drives and higher memory-to-core ratio,
2. DS-seriesthat can use the Premium storage capability,
3. G-series with Xeon E5 V3 family processors, high memory and CPU core numbers.