

# Deploying master nodes

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Master nodes provide optimized stability and performance for Explore clusters and are required for clusters with six or more nodes. A master node is dedicated to cluster management tasks and does not store records. This guide provides guidelines for adding three master nodes to new and existing clusters with six or more data nodes.

**Important:** If your Explore cluster contains fewer than six nodes, you do not need to configure master nodes.

Master nodes are virtual appliances with reduced resource specifications. Explore clusters typically require that all nodes match in both appliance type (virtual or physical) and size (resource specifications). However, master nodes are the exception: a virtual master node can be added to a cluster that has physical nodes and different resource specifications. Your data-only nodes should still match.

There are three common workflows for deploying master nodes:

- [Configure a new cluster with six or more data-only nodes and three master-only nodes](#)
- [Convert an existing cluster that already includes one dedicated master node to a cluster with three master-only nodes](#)
- [Configure an existing cluster with six or more data-only nodes to add three master-only nodes](#)

## Master node specifications

Depending on your virtual implementation, download the package or instance associated with the smallest Explore node and modify the disk size to match the specifications listed below.

**Important:** For KVM deployments, you must delete the data disk that is preconfigured in the package and then add a new 12 GB disk before first boot.

Type	vCPUs	RAM	Boot Disk	Data Disk	Network	Size
AWS	4	8 GB	4 GB	25 GB	1 management vNIC	m5.xlarge
Azure	4	8 GB	4 GB	25 GB	1 management vNIC	Standard_F4s_v2
Hyper-V	4	8 GB	4 GB	12 GB	1 management vNIC	EXA-Hyper-V Package
KVM	4	8 GB	4 GB	12 GB	1 management vNIC	5100v Extra-Small Package
VMware	4	8 GB	4 GB	12 GB	1 management vNIC	5100v Master Node