- **CephFile** - A node to scale out file sharing. Contains OSDs and MDS services.
- **CephObject** - A node to scale out object gateway access. Contains OSDs and RGW services.

When storage management traffic increases, controller nodes can become overloaded. The following node roles support various configurations and distributions of Ceph control plane services across multiple nodes. Coordinate controller node roles with role choices for storage nodes to ensure that all wanted control plane services are deployed.

- **Controller** - The most common controller node configuration. Contains all normal control plane services, including Ceph MGR, MDS, MON, RBD, and RGW services.
- **ControllerStorageDashboard** - A normal controller node plus a Grafana dashboard service. This node role adds a further network to isolate storage monitoring traffic from the storage back end.
- **ControllerStorageNFS** - A normal controller node plus a Ganesha service as a CephFS to NFS gateway.
- **ControllerNoCeph** - A normal controller, but without Ceph control plane services. This node role is selected when Ceph control plane services are moved to segregated nodes for increased performance and scaling.

The following node roles are not included by default in the RHOSP distribution, but are described in Red Hat online documentation. Use these roles to alleviate overloaded controller nodes by moving primary Ceph services to separate, dedicated nodes. These roles are commonly found in larger OpenStack installations with increased storage traffic requirements.

- **CephMon** - A custom-created node role that moves only the MON service from the controllers to a separate node.
- **CephMDS** - A custom-created node role that moves only the MDS service from the controllers to a separate node.

A Hyperconverged Infrastructure (HCI) node is a configuration with both compute and storage services and devices on the same node. This configuration can result in increased performance for heavy storage throughput applications. The default is the `ComputeHCI` role, which adds only OSDs to a compute node, effectively enlarging your dedicated Ceph cluster. Ceph control plane services remain on the controller nodes. The other node roles add various choices of control plane services to the hyperconverged node.

- **ComputeHCI** - A compute node plus OSDs. These nodes have no Ceph control plane services.
- **HciCephAll** - A compute node plus OSDs and all Ceph control plane services.
- **HciCephFile** - A compute node plus OSDs and the MDS service. Used for scaling out file sharing storage capacity.
- **HciCephMon** - A compute node plus OSDs and the MON and MGR services. Used for scaling out block storage capacity.
- **HciCephObject** - A compute node plus OSDs and the RGW service. Used for scaling out object gateway access.

A Distributed Compute Node (DCN) is another form of hyperconverged node that is designed for use in remote data centers or branch offices that are part of the same OpenStack overcloud. For DCN, the overcloud deployment creates a dedicated Ceph cluster, with a minimum of three nodes, per remote site in addition to the dedicated Ceph cluster at the primary site. This architecture is not a stretch cluster configuration. Later DCN versions support installing the `Glance` in the remote location for faster local image access.