To maintain Red Hat support, RHOSP installations must be built and configured with the TripleO Orchestration service. For a dedicated storage configuration, RHOSP 16 TripleO uses the same RHCS 4 `ceph-ansible` playbooks that are used to install stand-alone Ceph clusters. However, because TripleO dynamically organizes the playbooks and environment files to include in the deployment, direct use of Ansible without TripleO is not supported.

Node Roles Available in a Dedicated Ceph Implementation

A dedicated Ceph implementation is the `TripleO` default, and is sufficient for most small, medium, and moderately large OpenStack installations. A storage operator has significant choices for service distribution across overcloud nodes by using composable node roles. Except where stated otherwise, these node roles are included by default in later RHOSP versions.

Figure 13.2 presents an example of overcloud nodes to implement different service roles in a simple overcloud.

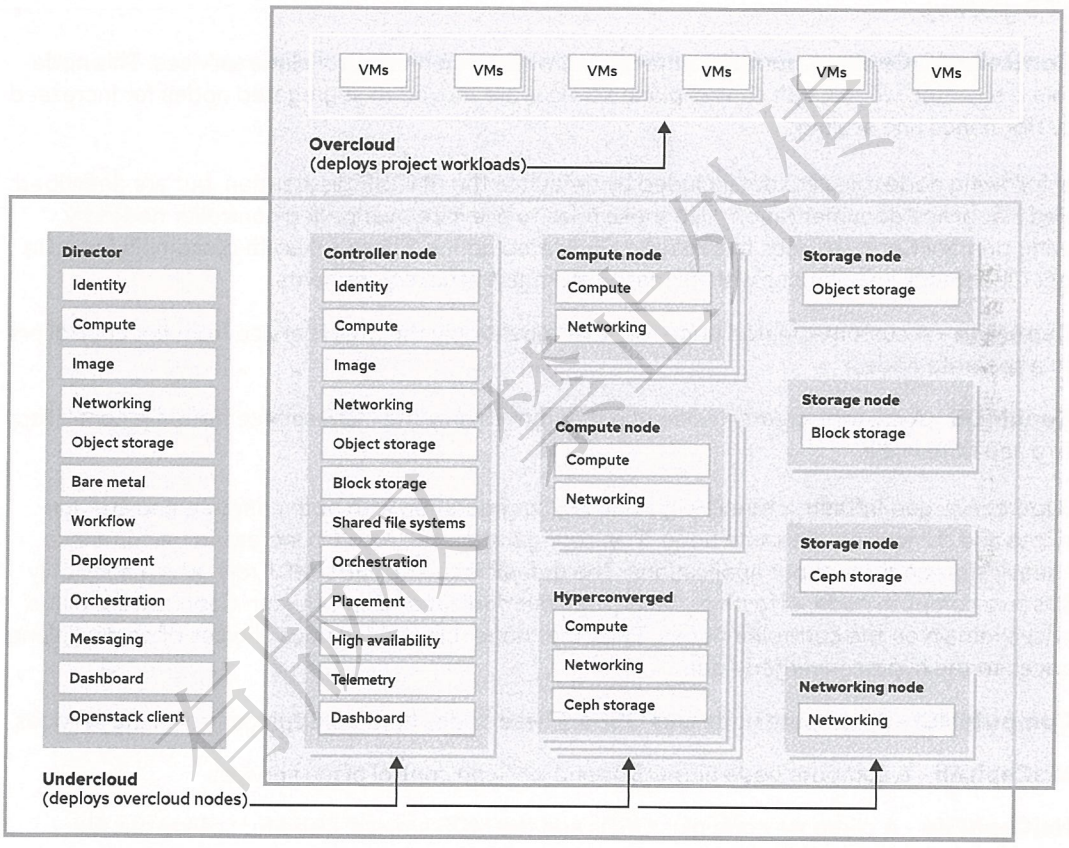

Figure 13.2: An example overcloud with multiple node roles

The following node roles determine the services that are placed on storage nodes that handle data plane traffic and on the physical storage devices.

The `CephStorage` role is the default, and control plane services are expected to be installed on controller nodes.

- **CephStorage** - The most common dedicated Ceph storage node configuration. Contains OSDs only, without control plane services.
- **CephAll** - A stand-alone full storage node with OSDs and all control plane services. This configuration might be used with the `ControllerNoCeph` node role.