Machine name	IP addresses	Role
servere.lab.example.com	172.25.250.14	Server "E" cluster storage node
serverf.lab.example.com	172.25.250.15	Server "F" second cluster storage node
serverg.lab.example.com	172.25.250.16	Server "G" spare cluster storage node
utility.lab.example.com	172.25.250.17	Utility services such as DNS and container registry
classroom.example.com	172.25.254.254	The classroom materials and content server
bastion.lab.example.com	172.25.250.254	Router to link VMs to central servers

The environment uses the `classroom` server as a NAT router to the outside network, and as a file server using the URLs `content.example.com` and `materials.example.com`, serving course content for certain exercises. Information on how to use these servers is provided in the instructions for those activities.

Managing your storage cluster

Your classroom environment comes with two Ceph storage clusters installed. The primary Ceph cluster is composed of `serverc`, `serverd`, and `servere`. The secondary Ceph cluster is composed of `serverf`. The `clienta.lab.example.com` server is installed with the `cephadm` container and it has the required configuration to manage the primary Ceph cluster. The `serverf.lab.example.com` server is installed with the `cephadm` container and it has the required configuration to manage the secondary Ceph cluster.

You can reset your classroom environment to set all of your classroom nodes back to their beginning state when the classroom was first created. Resetting allows you to clean your virtual machines, and start exercises over again. It is also a simple method for clearing a classroom issue which is blocking your progress and is not easily solved. Some chapters, such as chapters 02, 12, and 14, might ask you to reset your classroom to ensure you work on a clean environment. It is highly recommended to follow this instruction.

When your lab environment is first provisioned, and each time you restart the lab environment, the monitor (MON) services might fail to properly initialize and can cause a cluster warning message. On your Red Hat Online Learning cloud platform, this behavior is caused by the random order in which complex network interfaces and services are started. This timing issue does not occur in production Ceph storage cluster environments. To resolve the cluster warning, use the `ceph orch restart mon` command to restart the monitor services, which should then result in a `HEALTH_OK` cluster state.

Controlling Your Systems

In an instructor-led training classroom, you are assigned a physical computer (`foundationX.ilt.example.com`), which is used to access your virtual machines running on that host. You are automatically logged in to the physical machine as the `kiosk` user, with the password `redhat`. The classroom systems with which you work are virtual machines running on that host.