**Nodeset**

A Nodeset is a named collection of nodes for use by a job. Jobs may specify what nodes they require individually, however, by defining groups of node types once and referring to them by name, job configuration may be simplified.

Nodesets, like most configuration items, are unique within a tenant, though a nodeset may be defined on multiple branches of the same project as long as the contents are the same. This is to aid in branch maintenance, so that creating a new branch based on an existing branch will not immediately produce a configuration error.

- **nodeset**:

**name**: nodeset1

**nodes**:

- **name**: controller

**label**: controller-label

- **name**: compute1

**label**: compute-label

- **name**:

- compute2

- web

**label**: compute-label

**groups**:

- **name**: ceph-osd

**nodes**:

- controller

- **name**: ceph-monitor

**nodes**:

- controller

- compute1

- compute2

- **name**: ceph-web

**nodes**:

- web

Nodesets may also be used to express that Zuul should use the first of multiple alternative node configurations to run a job. When a Nodeset specifies a list of nodeset.alternatives, Zuul will request the first Nodeset in the series, and if allocation fails for any reason, Zuul will re-attempt the request with the subsequent Nodeset and so on. The first Nodeset which is sucessfully supplied by Nodepool will be used to run the job. An example of such a configuration follows.

- **nodeset**:

**name**: fast-nodeset

**nodes**:

- **label**: fast-label

**name**: controller

- **nodeset**:

**name**: slow-nodeset

**nodes**:

- **label**: slow-label

**name**: controller

- **nodeset**:

**name**: fast-or-slow

**alternatives**:

- fast-nodeset

- slow-nodeset

In the above example, a job that requested the *fast-or-slow* nodeset would receive *fast-label* nodes if a provider was able to supply them, otherwise it would receive *slow-label* nodes. A Nodeset may specify nodes and groups, or alternative nodesets, but not both.

**nodeset**

A Nodeset requires two attributes:

**nodeset.name*(required)***

The name of the Nodeset, to be referenced by a Job.

This is required when defining a standalone Nodeset in Zuul. When defining an in-line anonymous nodeset within a job definition, this attribute should be omitted.

**nodeset.nodes**

This attribute is required unless *alteranatives* is supplied.

A list of node definitions, each of which has the following format:

**nodeset.nodes.name*(required)***

The name of the node. This will appear in the Ansible inventory for the job.

This can also be as a list of strings. If so, then the list of hosts in the Ansible inventory will share a common ansible\_host address.

**nodeset.nodes.label*(required)***

The Nodepool label for the node. Zuul will request a node with this label.

**nodeset.groups**

Additional groups can be defined which are accessible from the ansible playbooks.

**nodeset.groups.name*(required)***

The name of the group to be referenced by an ansible playbook.

**nodeset.groups.nodes*(required)***

The nodes that shall be part of the group. This is specified as a list of strings.

**nodeset.alternatives  
Type:*list***

A list of alternative nodesets for which requests should be attempted in series. The first request which succeeds will be used for the job.

The items in the list may be either strings, in which case they refer to other Nodesets within the layout, or they may be a dictionary which is a nested anonymous Nodeset definition. The two types (strings or nested definitions) may be mixed.

An alternative Nodeset definition may in turn refer to other alternative nodeset definitions. In this case, the tree of definitions will be flattened in a breadth-first manner to create the ordered list of alternatives.

A Nodeset which specifies alternatives may not also specify nodes or groups (this attribute is exclusive with nodeset.nodes and nodeset.groups.