

Bright Cluster Manager 9.0

Developer Manual

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Preface

Welcome to the *Developer Manual* for Bright Cluster Manager 9.0.

0.1 About This Manual

This manual is aimed at helping developers who would like to program the Bright Cluster Manager in order to enhance or alter its functionality. It is not intended for end users who simply wish to submit jobs that run programs to workload managers, which is discussed in the *User Manual*. The developer is expected to be reasonably familiar with the parts of the *Administrator Manual* that is to be dealt with—primarily CMDaemon, of which cmsh and Bright View are the front ends.

This manual discusses the Python API to CMDaemon, and also covers how to program for metric collections.

0.2 About The Manuals In General

Regularly updated versions of the Bright Cluster Manager 9.0 manuals are available on updated clusters by default at `/cm/shared/docs/cm`. The latest updates are always online at <http://support.brightcomputing.com/manuals>.

- The *Administrator Manual* describes the general management of the cluster.
- The *Installation Manual* describes installation procedures for a basic cluster.
- The *User Manual* describes the user environment and how to submit jobs for the end user.
- The *Cloudbursting Manual* describes how to deploy the cloud capabilities of the cluster.
- The *Developer Manual* has useful information for developers who would like to program with Bright Cluster Manager.
- The *OpenStack Deployment Manual* describes how to deploy OpenStack with Bright Cluster Manager.
- The *Edge Manual* describes how to deploy Bright Edge with Bright Cluster Manager.
- The *Machine Learning Manual* describes how to install and configure machine learning capabilities with Bright Cluster Manager.

If the manuals are downloaded and kept in one local directory, then in most pdf viewers, clicking on a cross-reference in one manual that refers to a section in another manual opens and displays that section in the second manual. Navigating back and forth between documents is usually possible with keystrokes or mouse clicks.

For example: `<Alt>-<Backarrow>` in Acrobat Reader, or clicking on the bottom leftmost navigation button of xpdf, both navigate back to the previous document.

The manuals constantly evolve to keep up with the development of the Bright Cluster Manager environment and the addition of new hardware and/or applications. The manuals also regularly incorporate customer feedback. Administrator and user input is greatly valued at Bright Computing. So any comments, suggestions or corrections will be very gratefully accepted at manuals@brightcomputing.com.

There is also a feedback form available via Bright View, via the Account icon, , following the clickpath:

Account → Help → Feedback

0.3 Getting Administrator-Level Support

If the reseller from whom Bright Cluster Manager was bought offers direct support, then the reseller should be contacted.

Otherwise the primary means of support is via the website <https://support.brightcomputing.com>. This allows the administrator to submit a support request via a web form, and opens up a trouble ticket. It is a good idea to try to use a clear subject header, since that is used as part of a reference tag as the ticket progresses. Also helpful is a good description of the issue. The followup communication for this ticket goes via standard e-mail. Section 13.2 of the *Administrator Manual* has more details on working with support.

0.4 Getting Developer-Level Support

Developer support is given free, within reason. For more extensive support, Bright Computing can be contacted in order to arrange a support contract.

0.5 Getting Professional Services

Bright Computing normally differentiates between professional services (customer asks Bright Computing to do something or asks Bright Computing to provide some service) and support (customer has a question or problem that requires an answer or resolution). Professional services can be provided after consulting with the reseller, or the Bright account manager.

1

Bright Cluster Manager Python API

This chapter introduces the Python API of Bright Cluster Manager.

The Python API package was completely overhauled in Bright Cluster Manager 8.2.

The `cmdaemon-pythoncm` package now provides a pure Python connection to the cluster manager, making it possible for cluster administrators to automate cluster operations via Python.

It also makes it possible to run Python code on any operating system that supports Python 3.5 and higher.

The Bright Cluster Manager Python API uses the following extra modules:

1. `pyOpenSSL`
2. `ply`
3. `lxml`
4. `tabulate`
5. `monotonic`
6. `humanfriendly`
7. `six`

1.1 Getting Started

On the cluster head node itself the `python3` module can simply be loaded:

Example

```
[root@bright90 ~]# module load python3
```

To execute or develop the Python code on any other machine usually requires some extra steps:

- Python 3 (3.5, 3.6, 3.7, 3.8 will work) should be installed
- The 7 extra modules listed previously should be installed using Pip
- The `/cm/local/apps/python3/lib/python3.7/site-packages/pythoncm` directory should be copied over to the `site-packages` directory of the development machine

The `pythoncm` module should then be loaded, to confirm everything was set up correctly:

Example

```
[alice@desktop ~]# python -c "import pythoncm"
```

If connecting from outside the cluster, then port 8081 must not be blocked by a firewall.

A certificate is needed by the Python API to identify itself to CMDaemon.

The existence of the certificate on the head node should be checked. It should be copied over to the development machine, if it is needed there.

Example

```
[root@bright90 ~]# ls -al .cm/
-rw----- 1 root root 1708 Dec 11 09:25 admin.key
-rw----- 1 root root 1269 Dec 11 09:25 admin.pem
```

Example

```
[alice@bright90 ~]# ls -al .cm/
-rw----- 1 root root 1708 Dec 11 09:25 cert.key
-rw----- 1 root root 1269 Dec 11 09:25 cert.pem
```

The developer may need to contact the cluster administrator to get a certificate.

1.2 Connecting To A Cluster

The first step when working with the Python API is to establish a connection to the CMDaemon process on the cluster:

```
#!/usr/bin/env python
```

```
from pythoncm.cluster import Cluster
from pythoncm.settings import Settings
```

```
cluster = Cluster()
```

If working outside the cluster, then the settings for connecting to the cluster must be specified:

```
settings = Settings(host='<head-node-hostname>',
                    port=8081,
                    cert_file='/some/path/cert.pem',
                    key_file='/some/path/cert.key',
                    ca_file='../site-packages/pythoncm/etc/cacert.pem')
if not settings.check_certificate_files():
    print('Unable to load certificates')
else:
    cluster = Cluster(settings)
```

1.3 Inspecting Settings

All settings in Bright Cluster Manager are stored inside an entity.

Each entity has a type and a unique name among the entities of the same type.

To inspect an entity it should first be found inside the cluster:

```
node001 = cluster.get_by_name('node001')
```

If the name node001 was also given a different entity, then the type must be specified to ensure that the correct entity is returned:

```
node001 = cluster.get_by_name('node001', pythoncm.entity.Node)
node001 = cluster.get_by_name('node001', 'Node')
```


Once the node entity is found, inspecting the settings is a matter of printing the desired field:

```
print(node001.hostname)
print(node001.mac)
```

Complex settings, such as network interfaces, have their own settings:

```
for interfaces in node001.interfaces:
    print(interface.name, interface.ip)
```

Because many nodes could have a network interface called `eth0`, such a setting cannot be found from the cluster: The following code will return `None`.

```
eth0 = cluster.get_by_name('eth0')
```

To find all `eth0` interfaces, all nodes need to be found, and then iterated over:

```
nodes = cluster.get_by_type(pythoncm.entity.Node)
all_eth0 = [interface
            for node in nodes
            for interface in node.interfaces
            if interface.name == 'eth0']
```

1.4 Modifying Settings

Basic entity settings are exported as Python properties and can simply be changed:

```
node001.mac = '00:00:00:00:00:00'
node001.category = cluster.get_by_name('gpu', 'Category')
```

Similarly interfaces settings can be accessed and changed directly:

```
node001.interfaces[0].ip = '1.2.3.4'
node001.interfaces[0].network = cluster.get_by_name('ib', 'Network')
```

Removing an interface from a node can be done in various Pythonic ways:

```
node001.interfaces.remove(0)
del node001.interfaces[0]
node001.interfaces = [interface for interface in node001.interfaces
                      if interface.name != 'eth0']
```

To add a new interface, the entity instance needs to be created first, and then added to the node:

```
eth1 = pythoncm.entity.NetworkPhysicalInterface()
eth1.name = 'eth1'
eth1.ip = '1.2.3.4'
eth1.network = cluster.get_by_name('ib', 'Network')
node001.interfaces.append(eth1)
```

All changes are made on a local copy of the entity. The cluster has no knowledge of the changes until they are committed.

It is recommended to make many changes locally, and only commit once at the end.

The return value of the commit operation should always be checked.

Committing a badly-configured node will be blocked by the head node:

```
commit_result = node001.commit()
if not commit_result.good:
    print(commit_result)
```

An entity found from via the `cluster` object is removed differently.

As with `commit`, the result should always be checked: a removal can fail if a node is UP:

```
remove_result = node001.remove()
if not remove_result.good:
    print(remove_result)
```

1.5 Inspecting The Entire Cluster

The example directory contains a script to inspect the entire cluster.

Example

```
[root@bright90 ~]# cd /cm/local/examples/cmd/pythoncm/  
[root@bright90 pythoncm]# module load python3  
[root@bright90 pythoncm]# ./print-all.py
```

The example directory also contains a script that prints all metadata for all available entities in Bright Cluster Manager:

Example

```
[root@bright90 pythoncm]# ./entity_info.py
```

1.6 Performing Operations On Entities

All Python API functionality is contained in `/cm/local/apps/python3/lib/python3.7/site-packages/pythoncm`.

Methods are documented inside the python code itself.

```
node001 = cluster.get_by_name('node001')  
node001.power_on()
```

When operating on multiple entities, it is possible to iterate over them and do each operation individually.

```
nodes = cluster.get_by_type('Node')  
for node in nodes:  
    node.power_on()
```

However the same can also be done with a parallel version of the operation. When possible the parallel version should be used, because it is faster and requires less network traffic.

```
nodes = cluster.get_by_type('Node')  
cluster.parallel.power_on(nodes)
```

1.7 Monitoring

All monitoring data can be accessed using the Python API.

Monitoring is a set of operations performed on entities.

For example, to get latest data for a single entity:

```
print(node001.get_latest_monitoring_data())
```

Monitoring operations on multiple operations should be done using the monitoring module:

```
data = cluster.monitoring.get_latest_monitoring_data([node001,  
                                                    node002,  
                                                    node003])
```

1.8 Examples

The best way to get going is by looking at the examples. These can be found on the head node, at `/cm/local/examples/cmd/pythoncm`:

Example

```
[root@bright90 pythoncm]# ls
add-collection.py          entity_info.py          power-parallel-status.py
add-healthcheck.py       events.py               power-status.py
add-metric.py            execute.py              print-all.py
add-node-group.py        free_port.py           range-expander-test.py
add-role.py              get-status.py          remove-node-group.py
add-user.py              health-overview.py     sample-now-checks.py
all-nodes.py             instance_by_name.py    sample-now-parallel.py
certificate-info.py      latest-counter-data.py select-devices.py
clone-node-group.py      latest-health-data.py  service.py
clone-node.py            new-nodes.py           service-status.py
cm-job-analytics.py      open-close.py          set-node-image.py
create-certificate.py    parallel-execute-async.py wait-for-provisioning.py
create-ramdisk-task.py  parallel-execute-check-status.py wait-for-up.py
dump-monitoring-data.py  parallel-execute.py
```

The examples can be tried out after loading the Python environment:

Example

```
[root@bright90 ~]# cd /cm/local/examples/cmd/pythoncm/
[root@bright90 pythoncm]# module load python3
[root@bright90 pythoncm]# ./power-status.py
INFO      (25-May-2020 18:29:25) [cluster.py          :207] Follow redirection to active head IP:
10.141.255.254
INFO      (25-May-2020 18:29:25) [cluster.py          :298] Start event thread for session
42949672967
success: True
[
  {
    "uniqueKey": 1125899906842642,
    "oldLocalUniqueKey": 0,
    "baseType": "PowerStatus",
    "childType": "",
    "revision": "",
    "modified": false,
    "toBeRemoved": false,
    "readonly": false,
    "not_set_fields": [],
    "device": 38654705666,
    "host": 38654705665,
    "powerDistributionUnit": 0,
    "gpu": -1,
    "prt": 0,
    "name": "custom",
    "state": "ON",
    "msg": "",
    "extendedMsg": "",
    "indexes": [
      2
    ]
  }
],
```

```
    "tracker": 0,  
    "retries": 0  
]  
INFO      (25-May-2020 18:29:28) [entity_change.py      : 38] Stop event change watcher  
[root@bright90 pythoncm]#
```

2

Monitoring Data Producers

This chapter covers how to add a new metrics and health checks scripts with `cmsh`.

Five different types of Monitoring Data Producers can be added:

- `metric`: a script which produces a single value.
- `health check`: a script which produces a `PASS`, `FAIL`, `UNKNOWN`, or `no data` value.
- `collection`: a script that produces zero or more metrics, health checks, or a combination of both.
- `perpetual` a script that is started once over the lifetime of the Bright Cluster Manager `cmd` process. The script produces zero or more metrics, health checks, or a combination of both on its own timing mechanism.
- `prometheus` one or more URLs to Prometheus metric exporters.

A monitoring data producer cannot be plotted in `cmsh` or Bright View, because it contains no data. A producer defines measurable: metrics and/or health checks. It also generates data for these measurables, which can be plotted.

2.1 Measurables

There are three types of measurable:

- `metric`: a numeric value, or `no data`.
- `health check`: `PASS`/`FAIL`/`UNKNOWN`/`no data`.
- `enum metric`: one of a set of user-defined string based values, or `no data`.

2.2 Measurables Classes

All measurables are grouped into classes. A class is a user-defined free string field, with `/` as delimiters. Bright View uses this class to build a tree for easy search and access.

2.3 Metric Monitoring Data Producers

A metric data producer script generates one data point.

For example, as in the following script:

Example

```
[root@bright90 ~]# cat /path/to/my/metric
#!/bin/bash
info_fd=${CMD_INFO_FD:=3}    #set CMD_INFO_FD to 3 by default only if nothing set
# CMD_INFO_FD:=3    <--- same as: if [ -z "$CMD_INFO_FD" ]; then CMD_INFO_FD=3; fi
echo $((RANDOM))
# Optionally provide extra information
echo "Extra information" >&$info_fd
```

The script can be defined as a metric script via the `monitoring setup` mode of `cmsh`:

Example

```
[bright90]% monitoring setup
[bright90->monitoring->setup]% add metric my-metric
[...my-metric]% set script /path/to/my/metric
[...my-metric]% set class My/Class
[...my-metric]% set unit B
[...my-metric]% set interval 1m
[...my-metric]% commit
```

All nodes then execute the script every minute, and produce a random number.

2.4 Health Check Monitoring Data Producers

A health check data producer script generates one data point. The data point can be one of four possible values expected of it: `PASS`, `FAIL`, `UNKNOWN`, or no data. Other file descriptors can be used to provide extra information.

For example, as in the following script:

Example

```
[root@bright90 ~]# cat /path/to/my/health-check
#!/bin/bash
info_fd=${CMD_INFO_FD:=3}    #set CMD_INFO_FD to 3 by default if nothing set
if [ $((RANDOM)) -gt 8000 ]; then
    echo "PASS"
else
    echo "FAIL"
    # Optionally provide extra information
echo "Extra information" >&$info_fd
fi
```

The script can be defined as a health check script via the `monitoring setup` mode of `cmsh`:

Example

```
[bright90]% monitoring setup
[bright90->monitoring->setup]% add healthcheck my-health-check
[...my-check]% set script /path/to/my/health-check
[...my-check]% set class My/Class
[...my-check]% set interval 1m
[...my-check]% commit
```

All nodes then execute the script every minute, and produce data values with roughly 75% `PASS` and 25% `FAIL`.

2.5 Collection Monitoring Data Producers

A *collection data producer* script can generate multiple data points in one run. Data points can be a combination of metrics and health checks. Collection scripts are also allowed to produce no data.

A collection script has two modes: initialize mode and sample mode.

- `initialize`: defines the measurables that data values are generated for.
- `sample`: returns the data values for all the measurables defined in initialize mode.

During normal cluster operation the initialize mode is called only once, during boot. Afterwards, the script is called in sample mode at the desired interval.

The following example combines both of the metric and health check examples from earlier on. However, this time it is written as a single script, using JSON as the output format:

Example

```
[root@bright90 ~]# cat /path/to/my/collection
#!/usr/bin/python

import sys
import json
import random

def initialize():
    metric = {"metric": "my.collection.metric",
             "unit": "B",
             "class": "My/Collection"}
    check = {"check": "my.collection.check",
            "class": "My/Collection"}
    return [metric, check]

def sample():
    metric = {"metric": "my.collection.metric",
             "value": random.randint(0, 32767)}
    check = {"check": "my.collection.check",
            "info": "random with 25% failure rate",
            "value": 'PASS' if random.randint(0, 32767) > 8000 else 'FAIL'}
    return [metric, check]

def main():
    if len(sys.argv) > 1 and sys.argv[1] == "--initialize":
        data = initialize()
    else:
        data = sample()
    print json.dumps(data, indent=4)

if __name__ == '__main__':
    main()
```

The script can be defined as a collection script via the `monitoring setup` mode of `cmsh`:

Example

```
[bright90]% monitoring setup
[bright90->monitoring->setup]% add collection my-collection
[..my-collection]% set script /path/to/my/collection
[..my-collection]% set format JSON
```

```
[...my-collection]% set interval 1m
[...my-collection]% commit
```

All nodes then execute the script every minute and produce two data points upon each execution. That is, one metric and one health check per execution.

2.6 Perpetual Monitoring Data Producers

A perpetual data producer script is a special case of a collection data producer script. It is intended to be used if the script needs permanent memory storage.

Example

```
[root@bright90 ~]# cat /path/to/my/perpetual
#!/usr/bin/python

import my_sampler_module
import json
import time

# create single instance
sampler = my_sampler_module.MySampler()
# load important data into memory
sampler.load()

# Infinite loop with its own timing
delay = 0
while True:
    time.sleep(delay)
    (definitions, values, delay) = sampler.process()
    if definitions:
        # Print new measurables
        print json.dumps(definitions)
    # Print data
    print json.dumps(values)
```

The `my_sampler_module` is the part which does the important work.

Example

```
[root@bright90 ~]# cat /path/to/my/my_sampler_module.py
class MySampler:
    def __init__(self):
        self.initialized = False
        self.definitions = None

    def load(self):
        # Do time consuming work here
        metric = {"metric": "my.collection.metric",
                 "unit": "B",
                 "class": "My/Collection"}
        check = {"check": "my.collection.check",
                 "class": "My/Collection"}
        self.definitions = [metric, check]

    def process(self):
        metric = {"metric": "my.collection.metric",
```



```

        "value": random.randint(0, 32767)}
    check = {"check" : "my.collection.check",
            "value" : 'PASS' if random.randint(0, 32767) > 8000 else 'FAIL'}
    values = metric, check
    # return definitions once, afterwards they never change
    # but new definitions could be added this way
    definitions = self.definitions
    self.definitions = None
    return definitions, values, 60

```

The script can be defined as a perpetual script via the `monitoring setup` mode of `cmsh`:

Example

```

[bright90]% monitoring setup
[bright90->monitoring->setup]% add perpetual my-perpetual
[...my-perpetual]% set script /path/to/my/perpetual
[...my-perpetual]% set format JSON
[...my-perpetual]% commit

```

2.7 Prometheus Monitoring Data Producers

Prometheus is a monitoring and alerting toolkit (<https://prometheus.io>). A Prometheus monitoring data producer script parses data from a Prometheus exporter (<https://prometheus.io/docs/instrumenting/exporters/>)

The script can be defined as a Prometheus script via the `monitoring setup` mode of `cmsh`:

Example

```

[bright90]% monitoring setup
[bright90->monitoring->setup]% add prometheus my-prometheus-exporter
[...my-prometheus-exporter]% set urls http://my.prometheus.exporter:80
[...my-prometheus-exporter]% set interval 1m
[...my-prometheus-exporter]% commit

```

If multiple URLs are defined, then only the data values from the first successful HTTP GET are used.

2.8 Node Execution Filters

By default a monitoring data producer script is executed on every node. When this is not desirable, a node execution filter should be created. A node execution filter defines the nodes on which the producer script should be executed.

For example, a filter to execute the script only on cloud nodes can be configured as follows:

Example

```

[bright90]% monitoring setup use my-check
[...my-check]% nodeexecutionfilters
[...nodeexecutionfilters]% add type Cloud
[...nodeexecutionfilters*[Cloud*]]% set cloudnode yes
[...nodeexecutionfilters*[Cloud*]]% show

```

Parameter	Value
Base type	MonitoringExecutionFilter
Name	Cloud
Type	Type
Head node	no

```
Physical node      no
Cloud node        yes
Virtual node      no
Lite node         no
[...nodeexecutionfilters*[Cloud*]]% commit
```

It is also possible to filter based on the specific resources associated with a node:

Example

```
[bright90]% monitoring setup use my-IB-check
[...my-IB-check]% nodeexecutionfilters
[...nodeexecutionfilters]% add resource IB
[...nodeexecutionfilters*[IB*]]% set resources IB
[...nodeexecutionfilters*[IB*]]% commit
```

Because of high availability, a special resource, `active`, is defined for the active head node.

Example

```
[bright90]% monitoring setup use my-metric
[...my-metric]% nodeexecutionfilters
[...nodeexecutionfilters]% active
Added active resource filter
[...nodeexecutionfilters*]% commit
```

2.9 Execution Multiplexers

By default a monitoring data producer script is executed once: the node executes the script only for itself.

However, some scripts, such as BMC samplers, must be sampled from the active head node for all nodes.

In the following example a BMC script is run on each node that has the `ipmi` or `drac` resource:

Example

```
[bright90]% monitoring setup use my-ipmi-collection
[...my-ipmi-collection]% executionmultiplexers
[...executionmultiplexers]% add resource ipmi
[...executionmultiplexers*[ipmi*]]% set resources ipmi drac
[...executionmultiplexers*[ipmi*]]% set operator OR
[...executionmultiplexers*[ipmi*]]% commit
```

If an execution multiplexer `<multiplexer>` is defined, then there should also be a node execution filter `<filter>` associated with it to restrict the number of nodes on which the script runs.

This is because having the script run on many nodes for many other nodes is unlikely to be a desired configuration.

The combination of the execution filter and the multiplexer should be read as:

for every node that matches *filter*, run script, for each node that matches *multiplexer*.

A more specific example, using two of the preceding examples, with a filter based on the resource `IB`, and multiplexers based on the `IPMI/Drac` resources, the combination should be read as:

for every node that matches `IB`, run script, for each node that matches `ipmi` or `drac`.

2.10 Monitoring Resources

Every device in Bright Cluster Manager has one or more resources. These resources are automatically calculated from:

- Roles
- Hardware
- Settings

Resources for a specific node can be viewed as follows:

Example

```
[bright90]% device use node001
[bright90]% monitoringresources
CentOS7u5
Ethernet
category:default
```

It is possible to add one or more custom resources to a device:

Example

```
[bright90]% device use node001
[bright90]% add userdefinedresources MyResource
[bright90]% append userdefinedresources MyOtherResource
[bright90]% # wait ~10 seconds for the settings to propagate
[bright90]% monitoringresources
CentOS7u5
Ethernet
category:default
MyResource
MyOtherResource
```

Any of these resources can be used to filter and multiplex monitoring data producers.

If a resources changes because of a settings change, then monitoring automatically stops or starts sampling.

2.11 Collection Monitoring Data Producers With Filter And Multiplexer

If a script has an execution multiplexer set, then it needs to determine for which nodes the script runs:

Example

```
[root@bright90~]# cat /path/to/my/collection
#!/usr/bin/python

import sys
import json
import random

def initialize(entity):
    metric = {"metric": "my.collection.metric",
             "entity": entity,
             "unit": "B",
             "class": "My/Collection"}
    check = {"check": "my.collection.check",
```

```

        "entity": entity,
        "class": "My/Collection"}
    return [metric, check]

def sample(entity):
    metric = {"metric": "my.collection.metric",
              "entity": entity,
              "value": random.randint(0, 32767)}
    check = {"check" : "my.collection.check",
             "entity": entity,
             "value" : 'PASS' if random.randint(0, 32767) > 8000 else 'FAIL'}
    return [metric, check]

def main():
    try:
        # determine for which node we are sampling
        entity = os.environ['CMD_HOSTNAME']
    except:
        sys.stderr.write('Target device not specified in environment\n')
        return

    if len(sys.argv) > 1 and sys.argv[1] == "--initialize":
        data = initialize(entity)
    else:
        data = sample(entity)
    print json.dumps(data, indent=4)

if __name__ == '__main__':
    main()

```

It can be defined with a filter to run on the active head for all nodes in the GPU category:

Example

```

[bright90]% monitoring setup
[bright90->monitoring->setup]% add collection my-collection
[...my-collection]% set script /path/to/my/collection
[...my-collection]% set format JSON
[...my-collection]% set interval 1m
[...my-collection]% nodeexecutionfilters
[...nodeexecutionfilters]% active
Added active resource filter
[...nodeexecutionfilters]% exit
[...my-collection]% executionmultiplexers
[...executionmultiplexers]% add category
[...executionmultiplexers*[GPU*]% add category GPU
[...executionmultiplexers*[GPU*]% commit

```

The script is then executed on the head, once for each node in the category of GPU.

2.12 Collection Monitoring Data Producers For Standalone Entities

Sometimes monitoring data does not belong to a Bright Cluster Manager entity.

For this reason the standalone monitored entity was added in Bright Cluster Manager 8.0.

This entity can be anything with a name and custom type.

Bright Cluster Manager does nothing with this kind of entity, except allow it to store monitoring data.

Each standalone entity which needs to be monitored should be added:

Example

```
[bright90]% monitoring standalone
[bright90->monitoring->standalone]% add MSD.0
[...standalone*MSD.0*]% set type Lustre
[...standalone*MSD.0*]% commit
[...standalone*MSD.0*]% add MSD.1
[...standalone*MSD.1*]% set type Lustre
[...standalone*MSD.1*]% commit
```

A script can be created that produces data for all MSD entities:

Example

```
[root@bright90 ~]# cat /path/to/my/collection
#!/usr/bin/python

import sys
import json

def initialize():
    msd_0 = {"metric": "lustre.free.space",
            "entity": "MSD.0",
            "unit": "B",
            "class": "Lustre"}
    msd_1 = {"metric": "lustre.free.space",
            "entity": "MSD.1",
            "unit": "B",
            "class": "Lustre"}
    return [msd_0, msd_1]

def sample():
    msd_0 = {"metric": "lustre.free.space",
            "entity": "MSD.0",
            "value": 12345,
            "class": "Lustre"}
    msd_1 = {"metric": "lustre.free.space",
            "entity": "MSD.1",
            "value": 54321}
    return [msd_0, msd_1]

def main():
    if len(sys.argv) > 1 and sys.argv[1] == "--initialize":
        data = initialize()
    else:
        data = sample()
    print json.dumps(data, indent=4)

if __name__ == '__main__':
    main()
```

It can be defined to run on only the active head node:

Example

```
[bright90]% monitoring setup
[bright90->monitoring->setup]% add collection my-collection
[...my-collection]% set script /path/to/my/collection
[...my-collection]% set format JSON
[...my-collection]% set interval 5m
[...my-collection]% nodeexecutionfilters
[...nodeexecutionfilters]% active
Added active resource filter
[...nodeexecutionfilters]% commit
```

The script is then executed on the active head every 5 minutes and collects one data point for each MSD.

Data for a standalone script can be viewed with the same commands as for regular Bright Cluster Manager nodes.

Example

```
[bright90]% monitoring standalone
[bright90->monitoring->standalone]% use MSD.0
[...standalone*[MSD.0*]]% latestmetricdata
...
lustre.free.space          12345          3m 47s
```

2.13 Debugging Standalone Scripts

Page 531 of the *Administrator Manual* describes how debugging information can be obtained when running `samplenow` with the `--debug` option with the `ntp` healthcheck script.

Many scripts under `/cm/local/apps/cmd/scripts/` can have their debug output inspected with `samplenow --debug`.

A recursive `grep` on the head node, similar to the following, should show which scripts have a settable debug environment:

```
grep -r CMD_DEBUG /cm/local/apps/cmd/scripts/
```

The debug output in the script can be specified along the lines of the following code snippet:

Example

```
import os
debug = os.environ.get('CMD_DEBUG', '0') == '1'
info_fd = int(os.environ.get('CMD_INFO_FD', '3'))
if debug:
    os.write(info_fd, 'debug message')
```

3

Monitoring Actions

This chapter covers how to manage monitoring-driven actions with `cmsh`.

3.1 Actions And Triggers

A monitoring action is a script that is executed by `CMDaemon`. It runs when triggered by the monitored data.

An action by itself does nothing—it needs a trigger (section 12.4.5 of the *Administrator Manual*) to be defined to execute the action.

By default, several actions (section 12.4.4 of the *Administrator Manual*) are predefined:

- `Drain`: Drain node (node refuses new WLM jobs)
- `Event`: Send an event to users with connected client
- `ImageUpdate`: Update the image on the node
- `PowerOff`: Power off a device
- `PowerOn`: Power on a device:
- `PowerReset`: Power reset a device
- `Reboot`: Reboot a node
- `Send e-mail to administrators`: Send e-mail
- `Shutdown`: Shutdown a node
- `Undrain`: Undrain node (node accepts new WLM jobs)
- `killprocess`: `/cm/local/apps/cmd/scripts/actions/killprocess.pl`
- `remount`: `/cm/local/apps/cmd/scripts/actions/remount`
- `testaction`: `/cm/local/apps/cmd/scripts/actions/testaction`

A new action script can be created as follows:

Example

```
[bright90]% monitoring action
[bright90->monitoring->action]% add script MyScript
[...MyScript*]% set script /path/to/MyScript
[...MyScript*]% commit
```

3.2 Time Restrictions

It is possible to allow actions to only be executed at certain times, with the `allowedtime` setting.

Example

```
[bright90]% monitoring action
[bright90->monitoring->action]% add script MyScript
[...MyScript*]% set script /path/to/MyScript
[...MyScript*]% set allowedtime "9:00-17:00"
[...MyScript*]% commit
```

More complex timing restrictions are possible:

Example

```
monday-friday{9:00-17:00}
monday-friday{00:00-09:00;17:00-00:00};saturday-sunday
november-march{monday-saturday{13:00-17:00}}
may-september{monday-friday{09:00-18:00};saturday-sunday{13:00-17:00}}
```

Further examples can be seen in section 12.4.4 of the *Administrator Manual*, page 505.

3.2.1 Time Restriction Syntax In BNF Notation

The allowed values can be written as a BNF grammar:

Example

```
<start> =
  time_intervals
  | ""
<time_intervals> = <time_interval> (; <time_interval>)*
<time_interval> = <inner_time_interval>{<time_intervals>}
<inner_time_interval> =
  <day_of_week_interval>
  | <time_of_day_interval>
  | <day_of_month_interval>
  | <month_interval>
<day_of_week_interval> =
  (<day_of_week>-<day_of_week>)
  | (<day_of_week> (, <day_of_week>)*
<day_of_week> = sunday | monday | tuesday | wednesday | thursday | friday | saturday
<time_of_day_interval> = <time_of_day>-<time_of_day>
<time_of_day>= \d?\d:\d\d
<month_interval> = (<month>-<month>)
  | (<month> (, <month>)*
<month> = january | february | march | april | may | june | july | august | september
  | october | november | december
<day_of_month_interval> = (<day_of_month>-<day_of_month>)
  | (<day_of_month> (, <day_of_month>)*
<day_of_month> = \d?\d
```

3.3 CMDaemon Environment Variables

3.3.1 Standard Environment Variables Available In Action Scripts

Name	Description
CMD_ENTITY_KEY	The unique key of the entity that triggered the action.
CMD_ENTITY_NAME	The name of the entity that triggered the action.
CMD_ENTITY_TYPE	The type of entity that triggered the action.
CMD_MEASURABLE_NAME	The name of the measurable that triggered the action.
CMD_MEASURABLE_PARAMETER	The parameter of the measurable that triggered the action.
CMD_MEASURABLE_TYPE	The type of the measurable.
CMD_VALUE	The value that triggered the action.
CMD_RAW_VALUE	The raw value.
CMD_VALUE_TIME	The time on which the value was measured.
CMD_INFO_MESSAGE	Extra information sampled along with the value.
CMD_PRODUCER_NAME	The name of the monitoring data producer that samples the measurable.

...continues

...continued

Name	Description
CMD_ACTION_NAME	The name of the action that was triggered.
CMD_TRIGGER_NAME	The name of the trigger.
CMD_TRIGGER_EXPRESSION	The expression that was evaluated.
CMD_VALUE_EVAL	The result of the evaluated expression.
CMD_VALUE_COUNT	The number of times the expression evaluated to the same value.
CMD_SEVERITY	The assigned severity of the trigger.

All action scripts have the preceding standard environment variables set.

In `cmsh`, if the action object has its `node environment` parameter set to the value `yes`, then scripts running on a node are enabled with an extended environment that provides many more `CMD_*` environment variables. Otherwise they run in the standard environment.

A list of the standard or extended environment variables can be dumped by running the system command `env > /tmp/dumpfile` within an action script, such as the test example script, and triggering the script to run.

Many of the environment variables are similar to the ones used by `initialize` and `finalize` scripts (section E.3 of the *Administrator Manual*) in the `node-installer` environment.

3.3.2 Extended Environment Variables Available To Action Scripts

If the action object has its `node environment` parameter set to the value `yes`, then scripts run in an extended environment that provides many more `CMD_*` environment variables. Otherwise they run in the standard environment of section 3.3.1.

The following table shows the additionally available environment variables with some example values:

Table 3.3.2: Environment Variables For Nodes In The Extended Environment

Variable	Example Value
CMD_ACTIVE_MASTER_IP	10.141.255.254
CMD_ADDED_NODES	

...continues

Table 3.3.2: Environment Variables For Nodes In The Extended Environment ...continued

Variable	Example Value
CMD_BASE_TYPE	
CMD_BMCIP	
CMD_BMCPASSWORD	doQNeV1qksXr590
CMD_BMCUSERID	4
CMD_BMCUSERNAME	
CMD_BMC_TYPE	2
CMD_CATEGORY	default
CMD_CEPH_MDS_SOCKET	
CMD_CEPH_MGR_SOCKET	
CMD_CEPH_MON_SOCKET	
CMD_CEPH_NAME	
CMD_CEPH_OSD_ID	
CMD_CEPH_OSD_SOCKET	
CMD_CHASSIS	chassis01
CMD_CHASSIS_IP	10.141.1.1
CMD_CHASSIS_MEMBERS	
CMD_CHASSIS_PASSWORD	secr3t
CMD_CHASSIS_SLOT	1
CMD_CHASSIS_USERNAME	ADMIN

...continues

Table 3.3.2: Environment Variables For Nodes In The Extended Environment ...continued

Variable	Example Value
CMD_CHILD_TYPE	
CMD_CLUSTERNAME	Bright 9.0 Cluster
CMD_CONFIGURATION_CREATE_DIRECTORY	
CMD_CONFIGURATION_FILENAME	
CMD_CONFIGURATION_GROUP_NAME	
CMD_CONFIGURATION_MASK	
CMD_CONFIGURATION_NAME	
CMD_CONFIGURATION_USER_NAME	
CMD_CREATE_RAMDISK_TOKEN_CATS	
CMD_CREATE_RAMDISK_TOKEN_NODES	
CMD_CURRENT_NODES	
CMD_DATA	
CMD_DELLFW_FTP_PASSWORD	
CMD_DELLFW_FTP_USERNAME	
CMD_DELLFW_PATH	
CMD_DESTINATION_REVISION	
CMD_DESTINATION_VERSION	
CMD_DEVICE_HEIGHT	1
CMD_DEVICE_POSITION	10

...continues

Table 3.3.2: Environment Variables For Nodes In The Extended Environment ...continued

Variable	Example Value
CMD_DEVICE_TYPE	ComputeNode
CMD_DIRECTOR	
CMD_DIRECTOR_IP	
CMD_DOCKER_ENDPOINTS	
CMD_EDGE_SITE	
CMD_ETCD_CA	
CMD_ETCD_CAKEY	
CMD_ETCD_CLIENT_CA	
CMD_ETCD_CLIENT_CERT	
CMD_ETCD_CLIENT_KEY	
CMD_ETCD_MEMBER_CERT	
CMD_ETCD_MEMBER_KEY	
CMD_ETHERNETSWITCH	switch01:1
CMD_EXISTING_REVISION	
CMD_EXISTING_VERSION	
CMD_EXPORTS	
CMD_FAILONMISSINGBMC	
CMD_FAIL_ON_FAILED_BMCCOMMAND	YES
CMD_FSEXPPTS	

...continues

Table 3.3.2: Environment Variables For Nodes In The Extended Environment ...continued

Variable	Example Value
CMD_FSEXPORT_<name>_ALLOWWRITE	
CMD_FSEXPORT_<name>_HOSTS	
CMD_FSEXPORT_<name>_PATH	
CMD_FSMOUNTS	
CMD_FSMOUNT_<name>_DEVICE	

where <name> takes these SLASH substitutions:

<name>	example value
_SLASH_cm_SLASH_shared	\$localnfsserver:/cm/shared
_SLASH_dev_SLASH_pts	none
_SLASH_dev_SLASH_shm	none
_SLASH_home	\$localnfsserver:/home
_SLASH_proc	none
_SLASH_sys	none

CMD_FSMOUNT_<name>_FILESYSTEM

where <name> takes these SLASH substitutions:

<name>	example value
_SLASH_cm_SLASH_shared	nfs
_SLASH_dev_SLASH_pts	devpts
_SLASH_dev_SLASH_shm	tmpfs
_SLASH_home	nfs
_SLASH_proc	proc
_SLASH_sys	sysfs

CMD_FSMOUNT_<name>_MOUNTPOINT

where <name> takes these SLASH substitutions:

<name>	example value
_SLASH_cm_SLASH_shared	/cm/shared
_SLASH_dev_SLASH_pts	/dev/pts
_SLASH_dev_SLASH_shm	/dev/shm
_SLASH_home	/home
_SLASH_proc	/proc
_SLASH_sys	/sys

CMD_FSMOUNT_<name>_OPTIONS

...continues

Table 3.3.2: Environment Variables For Nodes In The Extended Environment ...continued

Variable	Example Value
----------	---------------

where *<name>* takes these SLASH substitutions:

<i><name></i>	example value
_SLASH_cm_SLASH_shared	rsize=32768,wsiz=32768,hard,intr,async
_SLASH_dev_SLASH_pts	gid=5,mode=620
_SLASH_dev_SLASH_shm	defaults
_SLASH_home	rsize=32768,wsiz=32768,hard,intr,async
_SLASH_proc	defaults,nosuid
_SLASH_sys	/defaults

CMD_GATEWAY	10.141.255.254
CMD_GUID	
CMD_HAPROXY_HOST	
CMD_HOSTNAME	node004
CMD_INITRD	
CMD_INITRD_KERNEL_PARAMS	
CMD_INITRD_KERNEL_VERSION	
CMD_INITRD_TMPFS_SIZE	
CMD_INSTALLMODE	AUTO
CMD_INSTANCE_ID	
CMD_INTERFACES	BOOTIF
CMD_INTERFACE_ <i><interface></i> _BOND	
CMD_INTERFACE_ <i><interface></i> _BRIDGE	
CMD_INTERFACE_ <i><interface></i> _DHCP	
CMD_INTERFACE_ <i><interface></i> _GATEWAY	
CMD_INTERFACE_ <i><interface></i> _IP	10.141.0.5

...continues

Table 3.3.2: Environment Variables For Nodes In The Extended Environment ...continued

Variable	Example Value
CMD_INTERFACE_<interface>_LANCHANNEL	
CMD_INTERFACE_<interface>_MAC	00:00:00:00:00:00
CMD_INTERFACE_<interface>_MODE	
CMD_INTERFACE_<interface>_MTU	1500
CMD_INTERFACE_<interface>_NETMASK	
CMD_INTERFACE_<interface>_REVISION	
CMD_INTERFACE_<interface>_SLAVES	
CMD_INTERFACE_<interface>_SPEED	
CMD_INTERFACE_<interface>_STARTIF	ALWAYS
CMD_INTERFACE_<interface>_TYPE	NetworkPhysicalInterface
CMD_INTERFACE_<interface>_VLANID	
<p>In the preceding CMD_INTERFACE_* variables, <interface> can take the following substitutions for the network interface:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>possible values for <interface></p> <p>BOOTIF</p> <p>drac0, drac1, drac2...</p> <p>cimc0, cimc1, cimc2...</p> <p>eth0, eth1, eth1...</p> <p>ib0, ib1, ib2...</p> <p>ilo0, ilo1, ilo2...</p> <p>ipmi0, ipmi1, ipmi2...</p> <p>rf0, rf1, rf2...</p> <p>eno1, enp0s18f2, and other names consistent with the RHEL7 interface naming convention</p> </div>	
CMD_IP	10.141.0.1
CMD_JOBNODELIST	
CMD_KUBERNETES_ADMIN_CERT	
CMD_KUBERNETES_ADMIN_CERT_KEY	

...continues

Table 3.3.2: Environment Variables For Nodes In The Extended Environment ...continued

Variable	Example Value
CMD_KUBERNETES_ADMIN_KUBECONFIG	
CMD_KUBERNETES_APISERVER_ENDPOINT	
CMD_KUBERNETES_CACERT	
CMD_KUBERNETES_CLIENT_CERTIFICATE	
CMD_KUBERNETES_CLIENT_KEY	
CMD_KUBERNETES_ETCD_ACTIVE	
CMD_KUBERNETES_ETCD_CLIENT_ENDPOINTS	
CMD_KUBERNETES_KUBELET_CERTIFICATE	
CMD_KUBERNETES_KUBELET_ENDPOINT	
CMD_KUBERNETES_KUBELET_KEY	
CMD_KUBE_DNS_IP	
CMD_KUBE_DOMAIN	
CMD_KUBE_INTERNAL_NETWORK_CIDR	
CMD_KUBE_POD_NETWORK_CIDR	
CMD_KUBE_SERVICE_NETWORK_CIDR	
CMD_LOGGING_CONFIG	
CMD_MAC	FA:16:3E:64:8E:1E
CMD_MODEL	
CMD_MODULES	

...continues

Table 3.3.2: Environment Variables For Nodes In The Extended Environment ...continued

Variable	Example Value
CMD_MODULE_<name>	
CMD_MOUNTS	
CMD_NAME	
CMD_NODEGROUPS	
CMD_NODEGROUP_NAME	
CMD_NODEGROUP_UID	
CMD_OPENSTACK_CINDER_PASSWORD	
CMD_OPENSTACK_CINDER_USERNAME	
CMD_OPENSTACK_ENABLED	
CMD_OPENSTACK_GLANCE_PASSWORD	
CMD_OPENSTACK_GLANCE_USERNAME	
CMD_OPENSTACK_KEYSTONE_INTERNAL_URL	
CMD_OPENSTACK_KEYSTONE_PASSWORD	
CMD_OPENSTACK_KEYSTONE_PUBLIC_URL	
CMD_OPENSTACK_KEYSTONE_URL	
CMD_OPENSTACK_KEYSTONE_USERNAME	
CMD_OPENSTACK_MANAGER_PASSWORD	
CMD_OPENSTACK_MANAGER_USERNAME	
CMD_OPENSTACK_MESSAGE_QUEUE_HOSTS	

...continues

Table 3.3.2: Environment Variables For Nodes In The Extended Environment ...continued

Variable	Example Value
CMD_OPENSTACK_MESSAGE_QUEUE_PASSWORD	
CMD_OPENSTACK_MESSAGE_QUEUE_USERNAME	
CMD_OPENSTACK_NOVA_PASSWORD	
CMD_OPENSTACK_NOVA_USERNAME	
CMD_OPENSTACK_REGIONS	
CMD_OPENSTACK_SERVICE_TENANT	
CMD_OPENSTACK_SSL_ENABLED	
CMD_OPENSTACK_TENANTS	
CMD_OWNED_INDEX	
CMD_PARTITION	base
CMD_PASSIVE_MASTER_IP	10.141.255.253
CMD_PDUS	
CMD_PORT	8081
CMD_PORTS	
CMD_POWER_CONTROL	custom
CMD_PROTOCOL	https
CMD_RACADM_PATH	
CMD_RACK	rack01
CMD_RACK_HEIGHT	42

...continues

Table 3.3.2: Environment Variables For Nodes In The Extended Environment ...continued

Variable	Example Value
CMD_RACK_ROOM	serverroom
CMD_READ_STRING	
CMD_REMOVED_NODES	
CMD_RESOLVE_NAME	
CMD_ROLES	
CMD_SCRIPTTIMEOUT	5
CMD_SCRIPT_TIMEOUT	5
CMD_SHARED_MASTER_IP	10.141.255.252
CMD_SKIPBMC	
CMD_SOFTWAREIMAGE	default-image
CMD_SOFTWAREIMAGE_PATH	/cm/images/default-image
CMD_STATE	
CMD_STATUS	
CMD_STATUS_CLOSED	NO
CMD_STATUS_HEALTHCHECK_FAILED	NO
CMD_STATUS_HEALTHCHECK_UNKNOWN	NO
CMD_STATUS_MESSAGE	
CMD_STATUS_RESTART_REQUIRED	NO
CMD_STATUS_STATEFLAPPING	NO

...continues

Table 3.3.2: Environment Variables For Nodes In The Extended Environment ...continued

Variable	Example Value
CMD_STATUS_USERMESSAGE	
CMD_STRICTUSERID	
CMD_SUBNET_MANAGER	
CMD_SWITCH_CONTROL_SCRIPT	
CMD_SWITCH_CONTROL_SCRIPT_TIMEOUT	
CMD_SYSINFO_SYSTEM_MANUFACTURER	RDO
CMD_SYSINFO_SYSTEM_NAME	OpenStack Compute
CMD_TAG	00000000a000
CMD_TARGET_NAME	
CMD_TARGET_NODES	
CMD_TYPE	
CMD_TYPES	
CMD_UCS_DN	sys/rack-unit-1
CMD_USERDEFINED1	var1
CMD_USERDEFINED2	var2
CMD_VMLINUZ	
CMD_WRITE_STRING	

4

CMDaemon REST API

Some data from CMDaemon can be accessed via its REST API.

The REST API only allows data to be retrieved at the time of writing of this section (October 2018). Data cannot currently be updated or removed.

4.1 Authentication, And Definition Of *<curlauth>*

Two forms of authentication are supported:

- Basic: HTTP authentication (`--basic` option of `curl`)
- Certificate: Certificate-based authentication (`--cert` option of `curl`). Certificate-based authentication is covered in section 6.4.2 of the *Administrator Manual*.

The following three commands give identical results:

```
[alice@bright90 ~]$ curl -k --basic --user "alice:password" "https://master:8081/rest"  
[alice@bright90 ~]$ curl -k --basic --user "alice:$(path to password file)" "https://master:8081/rest"  
[alice@bright90 ~]$ curl --cert ~/.cm/cert.pem --key ~/.cm/cert.key -k "https://master:8081/rest"
```

For security, it is best to use the certificate key-based version.

For convenience, the command and authority parts of the preceding three commands—that is the string in the line that includes the text from `curl` to `8081` in the three `curl` commands—is designated by *<curlauth>* in this chapter. Thus, each of the commands can be represented by:

Example

```
[alice@bright90 ~]$ <curlauth>/rest"
```

This allows the reader to focus on the path segment and variables part of the API.

4.2 Browsing The API

A summary diagram of the REST API is shown in figure 4.1:

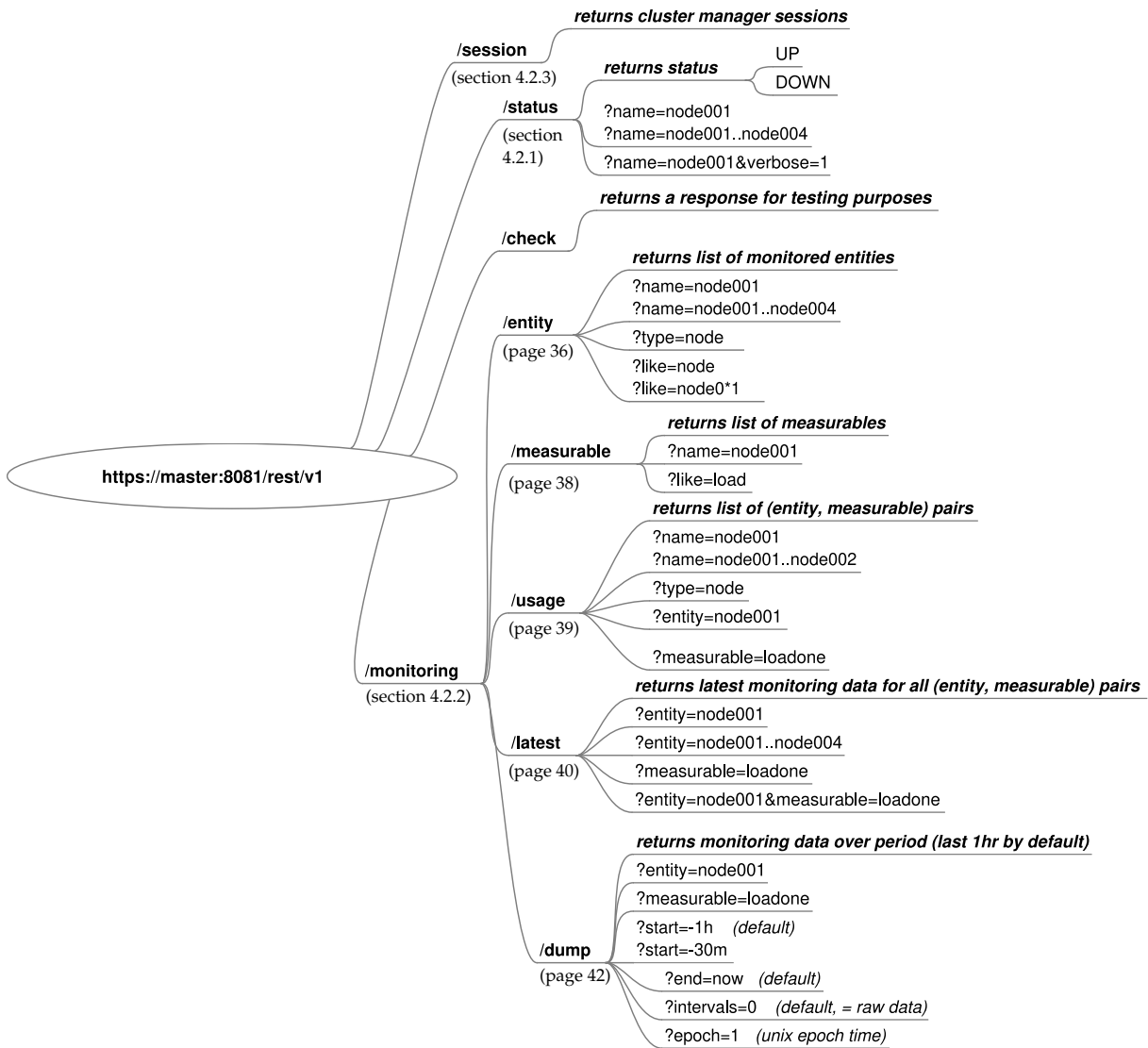


Figure 4.1: REST API Summary Tree

The remainder of this section elaborates upon the diagram.

The API directory structure is documented within the directory itself.

A GET operation on the main `/rest` entry point can list all subdirectories:

Example

```
[alice@bright90 ~]$ <curlauth>/rest"
["v1"]
```

New lines are not part of the output by default. Setting a parameter of 1 or 2 for the indent variable uses newlines and an indentation of one or two spaces, which makes the API output more readable for all API resource paths.

Example

```
[alice@bright90 ~]$ <curlauth>/rest?indent=1"
[
  "v1"
]
```


Appending /v1 to the URL gives the functionality available in the first version of the REST API.

Example

```
[alice@bright90 ~]$ <curlauth>/rest/v1?indent=1"
[
  "monitoring",
  "status",
  "session",
  "check"
]
```

Appending /monitoring to the URL lists the subdirectory functionality available for monitoring.

Example

```
[alice@bright90 ~]$ <curlauth>/rest/v1/monitoring?indent=1"
[
  "entity",
  "measurable",
  "latest",
  "dump",
  "usage"
]
```

4.2.1 Returning A Status Using /v1/status

The status resource path returns the UP/DOWN status for all devices:

Example

```
[alice@bright90 ~]$ <curlauth>/rest/v1/status?indent=2"
[
  {
    "hostname": "bright90",
    "status": "UP"
  },
  {
    "hostname": "node001",
    "status": "UP"
  },
  {
    "hostname": "node002",
    "status": "DOWN"
  }
]
```

The status can also be requested for a single device:

Example

```
[alice@bright90 ~]$ <curlauth>/rest/v1/status?name=node001&indent=2"
[
  {
    "hostname": "node001",
    "status": "UP"
  }
]
```

The “two dots” list specification format (section 2.5.5 of the *Administrator Manual*) used in Bright View and cmsh can also be used in the API:

Example

```
[alice@bright90 ~]$ <curlauth>/rest/v1/status?name=node001..node002&indent=2"
[
  {
    "hostname": "node001",
    "status": "UP"
  },
  {
    "hostname": "node002",
    "status": "DOWN"
  }
]
```

For more detailed information, the verbose parameter can be added (output truncated):

Example

```
[alice@bright90 ~]$ <curlauth>/rest/v1/status?verbose=1&indent=2"
[
  {
    "health_check_failed": true,
    "health_check_unknown": false,
    "hostname": "bright90",
    "provisioning_failed": false,
    "restart_required": false,
    "status": "UP"
  },
  {
    "health_check_failed": true,
    "health_check_unknown": false,
    "hostname": "node001",
    "provisioning_failed": false,
    ...
  }
]
```

4.2.2 Monitoring Using /v1/monitoring

Entities Via /v1/monitoring/entity

The entity resource returns information about the entities that are known to the monitoring system. It is possible for an entity known to the monitoring system to have no data.

Example

```
[alice@bright90 ~]$ <curlauth>/rest/v1/monitoring/entity?indent=1"
{
  "entities": [
    {
      "key": 12884901889,
      "name": "default",
      "type": "Category"
    },
    {
      "key": 17179869185,
      "name": "globalnet",
      "type": "Network"
    }
  ]
}
```

```
    },
    {
      "key": 17179869186,
      "name": "internalnet",
      "type": "Network"
    },
    ...
[alice@bright90 ~]$ <curlauth>/rest/v1/monitoring/entity?name=node001&indent=1"
{
  "entities": [
    {
      "key": 38654705666,
      "name": "node001",
      "type": "PhysicalNode"
    }
  ]
}
[alice@bright90 ~]$ <curlauth>/rest/v1/monitoring/entity?type=node&indent=1"
{
  "entities": [
    {
      "key": 38654705665,
      "name": "bright90",
      "type": "HeadNode"
    },
    {
      "key": 38654705666,
      "name": "node001",
      "type": "PhysicalNode"
    },
    {
      "key": 38654705667,
      "name": "node002",
      "type": "PhysicalNode"
    }
  ]
}
[alice@bright90 ~]$ <curlauth>/rest/v1/monitoring/entity?name=node001..node002&indent=1"
{
  "entities": [
    {
      "key": 38654705666,
      "name": "node001",
      "type": "PhysicalNode"
    },
    {
      "key": 38654705667,
      "name": "node002",
      "type": "PhysicalNode"
    }
  ]
}
```

A regex matcher can be used to find entities based on a name match:

Example

```
[alice@bright90 ~]$ <curlauth>/rest/v1/monitoring/entity?like=lobal&indent=1"
{
  "entities": [
    {
      "key": 17179869185,
      "name": "globalnet",
      "type": "Network"
    }
  ]
}
[alice@bright90 ~]$ <curlauth>/rest/v1/monitoring/entity?like=nod.O*1&indent=1"
{
  "entities": [
    {
      "key": 38654705666,
      "name": "node001",
      "type": "PhysicalNode"
    }
  ]
}
```

Measurables Via /v1/monitoring/measurable

This entry returns information about the defined measurables.

Example

```
[alice@bright90 ~]$ <curlauth>/rest/v1/monitoring/measurable?indent=1"
{
  "measurables": [
    {
      "key": 261993005057,
      "name": "IpForwDatagrams",
      "type": "metric"
    },
    {
      "key": 261993005058,
      "name": "IpFragCreates",
      "type": "metric"
    },
    {
      "key": 261993005059,
      "name": "IpFragFails",
      "type": "metric"
    },
    ...typically hundreds more lines...
  ]
}
[alice@bright90 ~]$ <curlauth>/rest/v1/monitoring/measurable?name=loadone&indent=1"
{
  "measurables": [
    {
      "key": 261993005138,
      "name": "LoadOne",
      "type": "metric"
    }
  ]
}
```

```

]
}
[alice@bright90 ~]$ <curlauth>/rest/v1/monitoring/measurable?like=load&indent=1"
{
  "measurables": [
    {
      "key": 261993005136,
      "name": "LoadFifteen",
      "type": "metric"
    },
    {
      "key": 261993005137,
      "name": "LoadFive",
      "type": "metric"
    },
    {
      "key": 261993005138,
      "name": "LoadOne",
      "type": "metric"
    }
  ]
}

```

Data Usage Via /v1/monitoring/usage

The usage resource is intended to show which (entity, measurable) pairs have data. For example, nodes with only 1 disk do not have data, if their associated measurables have the string sdb in their name.

To get the complete usage:

Example

```

[alice@bright90 ~]$ <curlauth>/rest/v1/monitoring/usage?indent=1"
{
  "data": [
    {
      "entity": "default",
      "measurable": "CoresTotal"
    },
    {
      "entity": "default",
      "measurable": "CoresUp"
    },
    ...typically hundreds more lines...
  ]
}

```

It is also possible to get all the measurables for which a specific entity, such as node001, has data.

Example

```

[alice@bright90 ~]$ <curlauth>/rest/v1/monitoring/usage?entity=node001&indent=1"
{
  "data": [
    {
      "entity": "node001",
      "measurable": "IpForwDatagrams"
    },
    {
      "entity": "node001",

```

```

    "measurable": "IpFragCreates"
  },
  {
    "entity": "node001",
    "measurable": "IpFragFails"
  },
  ...typically hundreds more lines...

```

Or all entities which have data for a specific measurable such as loadone:

Example

```

[alice@bright90 ~]$ <curlauth>/rest/v1/monitoring/usage?measurable=loadone&indent=1"
{
  "data": [
    {
      "entity": "bright90",
      "measurable": "LoadOne"
    },
    {
      "entity": "node001",
      "measurable": "LoadOne"
    }
  ]
}

```

The Latest Monitoring Data Via /v1/monitoring/latest

The latest resource can be used to retrieve the last known sampled data points.

It is possible to get the latest monitoring data for all (entity, measurable) pairs.

This may result in a lot of information: about 125 bytes per (entity, measurable) pair.

Example

```

[alice@bright90 ~]$ <curlauth>/rest/v1/monitoring/latest?indent=1"
{
  "data": [
    {
      "age": 47.868,
      "entity": "default",
      "measurable": "CoresTotal",
      "raw": 1.0,
      "time": 1540476088861,
      "value": "1"
    },
    {
      "age": 47.868,
      "entity": "default",
      "measurable": "CoresUp",
      "raw": 1.0,
      "time": 1540476088861,
      "value": "1"
    },
    {
      "age": 47.868,
      "entity": "default",
      "measurable": "NodesClosed",

```

```

    "raw": 0.0,
    "time": 1540476088861,
    "value": "0"
  },
  {
    "age": 47.868,
    "entity": "default",
    "measurable": "NodesDown",
    "raw": 0.0,
    "time": 1540476088861,
    "value": "0"
  },
  ...typically thousands more lines...

```

The latest data can be requested for a selection of entities and measurables.

Example

```

[alice@bright90 ~]$ <curlauth>/rest/v1/monitoring/latest?entity=node001&indent=1"
{
  "data": [
    {
      "age": 138.625,
      "entity": "node001",
      "measurable": "IpForwDatagrams",
      "raw": 0.0,
      "time": 1540476100389,
      "value": "0/s"
    },
    {
      "age": 138.625,
      "entity": "node001",
      "measurable": "IpFragCreates",
      "raw": 0.0,
      "time": 1540476100389,
      "value": "0/s"
    },
    {
      "age": 138.625,
      "entity": "node001",
      "measurable": "IpFragFails",
      "raw": 0.0,
      "time": 1540476100389,
      "value": "0/s"
    }
  ],
  ...typically hundreds more lines...

```

```

[alice@bright90 ~]$ <curlauth>/rest/v1/monitoring/latest?entity=node001..node004&indent=1"
...as for previous output but for the range of nodes001..node004...

```

```

[alice@bright90 ~]$ <curlauth>/rest/v1/monitoring/latest?measurable=LoadOne&indent=1"
{
  "data": [
    {
      "age": 114.099,

```

```

    "entity": "bright90",
    "measurable": "LoadOne",
    "raw": 0.03,
    "time": 1540476351361,
    "value": "0.03"
  },
  {
    "age": 155.07,
    "entity": "node001",
    "measurable": "LoadOne",
    "raw": 0.0,
    "time": 1540476310390,
    "value": "0"
  }
]
}
[alice@bright90 ~]$ <curlauth>/rest/v1/monitoring/latest?entity=node001&measurable=LoadOne&indent=1"
{
  "data": [
    {
      "age": 106.706,
      "entity": "node001",
      "measurable": "LoadOne",
      "raw": 0.0,
      "time": 1540476790390,
      "value": "0"
    }
  ]
}

```

Historic Data Dump Via /v1/monitoring/dump

Dumping historic data can be done using the entry point:

Example

```
[alice@bright90 ~]$ <curlauth>/rest/v1/monitoring/dump?<options>"
```

The dump resource has several options:

- **entity:** name or range of entities
- **measurable:** name of the measurable
- **start:** time to be plotted (default: -1h)
- **end:** end to be plotted (default: now)
- **intervals:** number of interpolation intervals (default: 0, raw data)
- **epoch:** display timestamps as unix epoch (default: 0)

The time specification format is the same one used for the `dumpmonitoringdata` command (section 12.6.4 of the *Administrator Manual*).

To prevent gigabytes of data being retrieved when no options are specified, `entity` and `measurable` must be specified.

If there is a need to dump all the monitoring data, then it can be done by specifying empty strings for both `entity` and `measurable`. For example, the following command dumps all raw data for the default last hour:

Example

```
[alice@bright90 ~]$ <curlauth>/rest/v1/monitoring/dump?entity=&measurable=&indent=1"
{
  "data": [
    {
      "entity": "default",
      "measurable": "CoresTotal",
      "raw": 1.0,
      "time": "2018/10/25 13:15:28",
      "value": "1"
    },
    {
      "entity": "default",
      "measurable": "CoresTotal",
      "raw": 1.0,
      "time": "2018/10/25 16:35:28",
      "value": "1"
    },
    {
      "entity": "default",
      "measurable": "CoresUp",
      "raw": 1.0,
      "time": "2018/10/25 13:49:28",
      "value": "1"
    },
    ...typically thousands more lines...
  ]
}
```

4.2.3 Session Using /v1/session

The response to the sessions method is similar to the output from listing in session mode of cmsh (cmsh -c "session list")

The method lists the sessions that the cluster manager is involved with.

Example

```
[alice@bright90 ~]$ <curlauth>/rest/v1/session/indent=1"
[
  {
    "address": "127.0.0.1",
    "group": "admin",
    "node": "bright90",
    "type": "node",
    "username": ""
  },
  {
    "address": "10.141.255.254",
    "group": "admin",
    "type": "node",
    "username": ""
  },
  {
    "address": "10.141.0.1",
    "group": "node",
    "node": "node001",
    "type": "node",
    "username": ""
  }
]
```

```
},  
{  
  "address": "10.141.0.2",  
  "group": "node",  
  "node": "node002",  
  "type": "node",  
  "username": ""  
}
```

5

Bright Cluster Manager JSON API

This chapter gives an alphabetical list of the JSON API services and entities available for Bright Cluster Manager. The API reference documentation for all available services and entities is available on the head node at:

`/cm/local/apps/cmd/etc/htdocs/userportal/download/json/index.html`.

It can also be accessed via the user portal of the cluster by clicking on the JSON API documentation link in the documentation section of the home page (Section 12.7.4 of the *Administrator Manual*).

Some examples of JSON usage are given in section 5.3

5.1 Services

- 5.1.1 **auth**
- 5.1.2 **ceph**
- 5.1.3 **cert**
- 5.1.4 **cloud**
- 5.1.5 **device**
- 5.1.6 **etcd**
- 5.1.7 **gui**
- 5.1.8 **job**
- 5.1.9 **keyvalue**
- 5.1.10 **kube**
- 5.1.11 **main**
- 5.1.12 **mon**
- 5.1.13 **net**
- 5.1.14 **openstack**
- 5.1.15 **part**
- 5.1.16 **proc**
- 5.1.17 **prov**
- 5.1.18 **serv**
- 5.1.19 **session**
- 5.1.20 **status**
- 5.1.21 **test**
- 5.1.22 **user**

5.2 Entities

5.2.1 AMDGPUSettings : GPUSettings

parent : GPUSettings

Parameter: gpuClockLevel

Type: unsigned integer

Description: Set the GPU clock frequency level

Parameter: memClockLevel

Type: unsigned integer

Description: Set the GPU memory clock frequency level

Parameter: powerplay

Type: string

Description: Set powerplay level

Parameter: overdrive

Type: unsigned integer

Description: This sets the percentage above maximum for the max Performance Level.

Parameter: fanspeed

Type: unsigned integer

Description: Fan speed value

Parameter: minimalGPUClock

Type: unsigned integer

Description: Minimum GPU clock speed in MHz

Parameter: minimalMemoryClock

Type: unsigned integer

Description: Minimum GPU Memory clock speed in MHz

Parameter: activityThreshold

Type: unsigned integer

Description: Workload required before clock levels change (%)

Parameter: hysteresisUp

Type: unsigned integer

Description: Delay before clock level is increased in milliseconds

Parameter: hysteresisDown

Type: unsigned integer

Description: Delay before clock level is decreased in milliseconds

5.2.2 ANFVolume : Entity

parent : Entity

Parameter: id

Type: string

Description: Unique identifier

Parameter: name

Type: string

Description: Name of the ANF volume.

Parameter: owner

Type: string

Description: Owner of the Azure NetApp pool and volume

Parameter: resourceGroup

Type: string

Description: The resource group where the volume was created

Parameter: netAppAccount

Type: string

Description: The NetApp account name where the volume was created

Parameter: location

Type: string

Description: The Azure location where the volume was created

Parameter: size

Type: unsigned integer

Description: Size in TB. Should be at least 4

Parameter: status

Type: string

Description: Status of the volume

Parameter: mountPath

Type: string

Description: String containing IP and mount path of the volume

Parameter: management

Type: enum

Description: Volume management type

Parameter: creationTime

Type: string

Description: Creation time

Parameter: sharedWith

Type: list of strings

Description: Other cmjob users that can use this volume for jobs.

5.2.3 ArchOSInfo : Entity

parent : Entity

Parameter: arch

Type: enum

Description: Architecture

Parameter: os

Type: enum

Description: Operating system

5.2.4 ArchOS : ArchOSInfo

parent : ArchOSInfo

Parameter: primaryImage

Type: reference to SoftwareImage

Description: Image used to boot new nodes and keep /cm/shared up to date

Parameter: shared

Type: reference to FSPart or None

Description: Shared directory

Parameter: installer

Type: reference to FSPart or None

Description: Node installer

Parameter: priority

Type: unsigned integer

Description: Priority

5.2.5 AWSIntermediateStorage : CMJobIntermediateStorage

parent : CMJobIntermediateStorage

Parameter: bucket

Type: string

Description: S3 Bucket name

Parameter: region

Type: string

Description: Region for S3 bucket

Parameter: maxObjectLifetime

Type: float

Description: Max time to store data in bucket (0 for infinite)

Parameter: maxFSxInstanceCapacity

Type: unsigned integer

Description: Maximum FSx instance size(GiB) that user can request.

Parameter: maxFSxInstanceCountPerUser

Type: unsigned integer

Description: Maximum amount of FSx instances that a user can have simultaneously.

Parameter: defaultFSxInstanceCapacity

Type: unsigned integer

Description: Default capacity of an FSx instance, used if not specified during creation.

Parameter: securityGroupFSx

Type: string

Description: Security group ID of the FSx instances

5.2.6 AzureDataDisk : AzureDisk

parent : AzureDisk

Parameter: lun

Type: unsigned integer

Description: Logical unit number of a block device to be attached

Parameter: removeOnTermination

Type: boolean

Description: If true, the drive will be removed when the instance it is attached to gets terminated

5.2.7 AzureDisk : Entity

parent : Entity

Parameter: name

Type: string

Description: Name of the data disk

Parameter: size

Type: unsigned integer

Description: Size of the drive

Parameter: image

Type: string

Description: URL to a source image for the disk

Parameter: storageAccountName

Type: string

Description: Name of a storage account to hold the disk

Parameter: imageContainerName

Type: string

Description: If the disk has the image url set, the image will be copied to a container with this name

Parameter: containerName

Type: string

Description: Name of a container in storage account to hold the disk

Parameter: managedDiskParameters

Type: AzureManagedDiskParameters

Description: Azure Managed Disk parameters

5.2.8 AzureExtension : Entity

parent : Entity

Parameter: name

Type: string

Description: User-defined name of the private cloud

Parameter: location

Type: reference to AzureLocation

Description: Region of the cluster extension

Parameter: resourceGroup

Type: string

Description: Azure resource group name for all resources in the extension

Parameter: network

Type: reference to Network

Description: Network associated with the extension

Parameter: extraField

Type: list of strings

Description: Reserved

5.2.9 AzureIntermediateStorage : CMJobIntermediateStorage

parent : CMJobIntermediateStorage

Parameter: storageAccount

Type: string

Description: Azure storage account name

Parameter: accessKey

Type: string

Description: Azure storage account access key

Parameter: container

Type: string

Description: Container name to place data into

Parameter: netAppSubnet

Type: string

Description: Subnet where ANF volumes will be created

Parameter: netAppNetwork

Type: string

Description: Network where the NetApp Subnet was created

Parameter: netAppAccountName

Type: string

Description: Name of the NetApp account to create ANF volumes

Parameter: netAppServiceLevel

Type: string

Description: Service Level for newly created ANF volumes

Parameter: maxANFVolumeCapacity

Type: unsigned integer

Description: Maximum ANF volume size(TiB) that user can request.

Parameter: maxANFVolumeCountPerUser

Type: unsigned integer

Description: Maximum amount of ANF volumes that a user can have simultaneously.

Parameter: defaultANFVolumeCapacity

Type: unsigned integer

Description: Default capacity of an ANF volume, used if not specified during creation.

5.2.10 AzureLocation : CloudRegion

parent : CloudRegion

5.2.11 AzureManagedDiskParameters : Entity

parent : Entity

Parameter: id

Type: string

Description: Managed disks resource ID

Parameter: storageAccountType

Type: string

Description: Storage account type for managed disks

5.2.12 AzureOSDisk : AzureDisk

parent : AzureDisk

Parameter: cachingType

Type: enum

Description: Disk caching type

5.2.13 AzureProvider : CloudProvider

parent : CloudProvider

Parameter: subscriptionId

Type: string

Description: Azure Subscription ID.

Parameter: clientId

Type: string

Description: Azure Client ID.

Parameter: clientSecret

Type: string

Description: Azure Client Secret.

Parameter: tenantId

Type: string

Description: Tenant ID.

Parameter: defaultLocation

Type: reference to AzureLocation or None

Description: Default location to start virtual machine in.

Parameter: defaultVMSize

Type: reference to AzureVMSize or None

Description: Default cloud node VM size.

Parameter: defaultDirectorVMSize

Type: reference to AzureVMSize or None

Description: Default cloud director VM size.

Parameter: extensions

Type: list of AzureExtension

Description: List of extensions

Parameter: defaultNodeInstallerImage

Type: string

Description: Default node-installer image, can be overridden in the OS disk.

Parameter: marketplaceUsePolicy

Type: enum

Description: Preference towards using marketplace images

Parameter: useFreeMarketplaceImage

Type: boolean

Description: If set to 'true', the cloud nodes falling within the node license count will be created using a node-installer marketplace image coming from the Azure marketplace. This is the recommended default. If set to false, a legacy behavior will be enabled, which will make CMDaemon perform a (one-time) server-side copy of the node-installer image to the cluster-extension's storage account from the storage account path specified by 'defaultNodeInstallerImage'

5.2.14 AzureSettings : CloudSettings

parent : CloudSettings

Parameter: instanceId

Type: string

Description: Instance-ID provided by Azure

Parameter: instanceUrl

Type: string

Description: Availability set resource identifier

Parameter: nicId

Type: string

Description: Network interface identifier

Parameter: location

Type: reference to AzureLocation

Description: Virtual Machine location

Parameter: resourceGroupName

Type: string

Description: Azure Resource Group Name

Parameter: storageAccountName

Type: string

Description: Name of a storage account where boot diagnostics will be stored for this instance

Parameter: deploymentName

Type: string

Description: Name of the Azure deployment associated with this node

Parameter: publicIpName

Type: string

Description: Name of a public ip object to be assigned to the node

Parameter: VMSize

Type: reference to AzureVMSize

Description: Virtual Machine size

Parameter: disks

Type: list of AzureDisk

Description: Storage disks.

Parameter: marketplaceUsePolicy

Type: enum

Description: Preference towards using marketplace Images

Parameter: availabilityZone

Type: string

Description: Azure Availability zone where all the resources related to this VM will be allocated

Parameter: useFreeMarketplaceImage

Type: boolean

Description: If set to 'true', the cloud nodes falling within the node license count will be created using a node-installer marketplace image coming from the Azure marketplace. This is the recommended default. If set to false, a legacy behavior will be enabled, which will make CMDaemon perform a (one-time) server-side copy of the node-installer image to the cluster-extension's storage account from the storage account path specified by 'defaultNodeInstallerImage'

5.2.15 AzureVMSize : CloudType**parent** : CloudType**5.2.16** BadEntityManagers : Entity**parent** : Entity**Parameter:** name**Type:** string**Description:** Name**Parameter:** managers**Type:** list of strings**Description:** Managers**5.2.17** BasicResource : Entity**parent** : Entity**Parameter:** name**Type:** string**Description:** Name**Parameter:** dependency**Type:** unsigned integer**Description:** Dependency on another resource, run this resource on the same node as the dependency**Parameter:** exclude**Type:** list of unsigned numbers**Description:** Do not run this resource on any node running one of the excluded resources**Parameter:** disabled**Type:** boolean**Description:** Disable the resource from being given to any node**Parameter:** stopOnRemove**Type:** boolean**Description:** Automatically stop resource when removed**5.2.18** BeeGFSAdmonRole : Role**parent** : Role**Parameter:** databaseFile**Type:** string**Description:** Path to the database**Parameter:** managementNode**Type:** reference to Node**Description:** Node with a management role**Parameter:** clearDatabase**Type:** boolean**Description:** Delete database on startup

Parameter: queryInterval
Type: unsigned integer
Description: Interval for querying servers for new statistics data

Parameter: authFile
Type: string
Description: Path to the shared secret authentication file

Parameter: fallbackExpiration
Type: unsigned integer
Description: Time after which a connection to a fallback interface expires

Parameter: interfacesFile
Type: string
Description: Path to the file with a list of interfaces for communication

Parameter: maxInternodeNumber
Type: unsigned integer
Description: Max number of simultaneous connections to the same node

Parameter: httpPort
Type: unsigned integer
Description: TCP port for built-in web server

Parameter: admonPortUDP
Type: unsigned integer
Description: UDP port for admon service

Parameter: netFilterFile
Type: string
Description: Path to a file with a list of allowed IP subnets

Parameter: tcpOnlyFilterFile
Type: string
Description: Path to a file with a list of no DRMA IP ranges

Parameter: logLevel
Type: unsigned integer
Description: Log level

Parameter: noLogDate
Type: boolean
Description: Do not show date along with time in log

Parameter: numberOfLogLines
Type: unsigned integer

Description: Number of lines in log file, after which it will be rotated

Parameter: numberOfLogRotatedFiles

Type: unsigned integer

Description: Number of old log files to keep

Parameter: logFile

Type: string

Description: Path to the log file, empty means logs go to the journal

Parameter: enableMail

Type: boolean

Description: Enable email notification

Parameter: smtpSendType

Type: string

Description: How to send the email to an smtp server

Parameter: sendmailPath

Type: string

Description: Path to the sendmail binary

Parameter: checkIntervalTime

Type: unsigned integer

Description: Interval for checking for new events that must be mailed

Parameter: minimalDownTime

Type: unsigned integer

Description: Interval of node downtime after which it should be reported

Parameter: mailRecipients

Type: list of strings

Description: Email addresses to send notifications to

Parameter: resendMailTime

Type: unsigned integer

Description: Amount of time to sent email again as a reminder

Parameter: mailSender

Type: string

Description: Email address to send notifications from

Parameter: smtpServer

Type: string

Description: SMTP server to use for sending emails

Parameter: numberOfWorkers

Type: unsigned integer

Description: Number of worker threads

5.2.19 BeeGFSCClientRole : Role

parent : Role

Parameter: managementNode

Type: reference to Node

Description: Node with a management role

Parameter: authFile

Type: string

Description: Path to the shared secret authentication file

Parameter: clientPortUDP

Type: unsigned integer

Description: UDP port for client service

Parameter: helperPortTCP

Type: unsigned integer

Description: TCP port for helper service

Parameter: communicationRetry

Type: unsigned integer

Description: Time for retries in case of a network failure

Parameter: fallbackExpiration

Type: unsigned integer

Description: Time after which a connection to a fallback interface expires

Parameter: interfacesFile

Type: string

Description: Path to the file with a list of interfaces for communication

Parameter: maxInternodeNumber

Type: unsigned integer

Description: Max number of simultaneous connections to the same node

Parameter: netFilterFile

Type: string

Description: Path to a file with a list of allowed IP subnets

Parameter: useRDMA

Type: boolean

Description: Use RDMA

Parameter: rdmaBuffersNumber

Type: unsigned integer

Description: Number of RDMA buffers

Parameter: rdmaBufferSize

Type: unsigned integer

Description: Maximum size of a buffer that will be sent over the network

Parameter: rdmaTypeOfService

Type: unsigned integer

Description: RDMA type of service

Parameter: tcpOnlyFilterFile

Type: string

Description: Path to a file with a list of no DRMA IP ranges

Parameter: mountpoint

Type: string

Description: Path to a beegfs filesystem mountpoint

Parameter: logLevel

Type: unsigned integer

Description: Log level

Parameter: noLogDate

Type: boolean

Description: Do not show date along with time in log

Parameter: numberOfLogLines

Type: unsigned integer

Description: Number of lines in log file, after which it will be rotated

Parameter: numberOfLogRotatedFiles

Type: unsigned integer

Description: Number of old log files to keep

Parameter: logFile

Type: string

Description: Path to the log file, empty means logs go to the journal

Parameter: enableQuota

Type: boolean

Description: Enable quota

Parameter: createHardlinksAsSymlinks

Type: boolean

Description: Create a symlink when an application tries to create a hardlink

Parameter: mountSanityCheckMs

Type: unsigned integer

Description: Time in ms server has to respond after mount sanity check

Parameter: sessionCheckOnClose

Type: boolean

Description: Check for valid sessions on storage server when a file is closed

Parameter: syncOnClose

Type: boolean

Description: Sync file content on close

Parameter: targetOfflineTimeout

Type: unsigned integer

Description: Timeout until all storage targets are considered offline when no target state updates can be fetched from management server

Parameter: updateTargetStates

Type: unsigned integer

Description: Interval for storage targets states check

Parameter: enableXAttrs

Type: boolean

Description: Enable xattrs

Parameter: enableACLs

Type: boolean

Description: Enable ACLs

Parameter: fileCacheType

Type: string

Description: File read/write cache type

Parameter: preferredMetaFile

Type: string

Description: Path to a file with preferred metadata servers

Parameter: preferredStorageFile

Type: string

Description: Path to a file with preferred storage targets

Parameter: remoteFSync

Type: boolean

Description: Should fsync be executed on server to flush cached file

Parameter: useGlobalAppendLocks

Type: boolean

Description: Should files, opened in append mode, be protected by locks on local machine (false) or on servers (true)

Parameter: useGlobalFileLocks

Type: boolean

Description: Should advisory locks be checked on local machine (false) or on servers (true)

Parameter: helperWorkersNumber

Type: unsigned integer

Description: Number of worker threads for helper service

5.2.20 BeeGFSManagementRole : Role

parent : Role

Parameter: dataDir

Type: string

Description: Path to the data directory

Parameter: allowNewServers

Type: boolean

Description: Allow new servers registration

Parameter: allowNewTargets

Type: boolean

Description: Allow new storage targets registration

Parameter: authFile

Type: string

Description: Path to the shared secret authentication file

Parameter: backlogTCP

Type: unsigned integer

Description: TCP listen backlog

Parameter: interfacesFile

Type: string

Description: Path to the file with a list of interfaces for communication

Parameter: managementPortTCP

Type: unsigned integer

Description: TCP port for management service

Parameter: managementPortUDP

Type: unsigned integer

Description: UDP port for management service

Parameter: netFilterFile

Type: string

Description: Path to a file with a list of allowed IP subnets

Parameter: `logLevel`

Type: unsigned integer

Description: Log level

Parameter: `noLogDate`

Type: boolean

Description: Do not show date along with time in log

Parameter: `numberOfLogLines`

Type: unsigned integer

Description: Number of lines in log file, after which it will be rotated

Parameter: `numberOfLogRotatedFiles`

Type: unsigned integer

Description: Number of old log files to keep

Parameter: `logFile`

Type: string

Description: Path to the log file, empty means logs go to the journal

Parameter: `enableQuota`

Type: boolean

Description: Enable quota

Parameter: `quotaQueryGIDFile`

Type: string

Description: Path to a file with GIDs to be checked by quota

Parameter: `quotaQueryGIDRange`

Type: string

Description: GID range to be checked by quota

Parameter: `quotaQueryUIDFile`

Type: string

Description: Path to a file with UIDs to be checked by quota

Parameter: `quotaQueryUIDRange`

Type: string

Description: UID range to be checked by quota

Parameter: `quotaQueryType`

Type: string

Description: Query type for quota

Parameter: `quotaQueryWithSystemUsersGroups`

Type: boolean

Description: Allow also system users/groups to be checked by quota

Parameter: quotaUpdateInterval

Type: unsigned integer

Description: Quota update interval

Parameter: targetOfflineTimeout

Type: unsigned integer

Description: Timeout until tagrets on a storage server are considered offline when no target status is received

Parameter: clientAutoRemove

Type: unsigned integer

Description: Time after which an unreachable node is considered dead

Parameter: numberOfWorkers

Type: unsigned integer

Description: Number of worker threads

Parameter: metaDynamicPools

Type: boolean

Description: Raise lower limits if difference in capacity becomes too large between targets

Parameter: metaInodesLowLimit

Type: string

Description: Metadata inode free space pool threshold

Parameter: metaInodesEmergencyLimit

Type: string

Description: Metadata inode free space pool threshold

Parameter: metaSpaceLowLimit

Type: string

Description: Metadata space free space pool threshold

Parameter: metaSpaceEmergencyLimit

Type: string

Description: Metadata space free space pool threshold

Parameter: storageDynamicPools

Type: boolean

Description: Raise lower limits if difference in capacity becomes too large between targets

Parameter: storageInodesLowLimit

Type: string

Description: Storage inode free space pool threshold

Parameter: storageInodesEmergencyLimit

Type: string

Description: Storage inode free space pool threshold

Parameter: storageSpaceLowLimit

Type: string

Description: Storage space free space pool threshold

Parameter: storageSpaceEmergencyLimit

Type: string

Description: Storage space free space pool threshold

5.2.21 BeeGFSMetadataRole : Role

parent : Role

Parameter: dataDir

Type: string

Description: Path to the data directory

Parameter: managementNode

Type: reference to Node

Description: Node with a management role

Parameter: authFile

Type: string

Description: Path to the shared secret authentication file

Parameter: backlogTCP

Type: unsigned integer

Description: TCP listen backlog

Parameter: fallbackExpiration

Type: unsigned integer

Description: Time after which a connection to a fallback interface expires

Parameter: interfacesFile

Type: string

Description: Path to the file with a list of interfaces for communication

Parameter: maxInternodeNumber

Type: unsigned integer

Description: Max number of simultaneous connections to the same node

Parameter: metaPortTCP

Type: unsigned integer

Description: TCP port for metadata service

Parameter: metaPortUDP

Type: unsigned integer

Description: UDP port for metadata service

Parameter: netFilterFile

Type: string

Description: Path to a file with a list of allowed IP subnets

Parameter: useRDMA

Type: boolean

Description: Use RDMA

Parameter: rdmaTypeOfService

Type: unsigned integer

Description: RDMA type of service

Parameter: tcpOnlyFilterFile

Type: string

Description: Path to a file with a list of no DRMA IP ranges

Parameter: logLevel

Type: unsigned integer

Description: Log level

Parameter: noLogDate

Type: boolean

Description: Do not show date along with time in log

Parameter: numberOfLogLines

Type: unsigned integer

Description: Number of lines in log file, after which it will be rotated

Parameter: numberOfLogRotatedFiles

Type: unsigned integer

Description: Number of old log files to keep

Parameter: logFile

Type: string

Description: Path to the log file, empty means logs go to the journal

Parameter: clientXAttrs

Type: boolean

Description: Enable client-side extended attributes

Parameter: clientACLs

Type: boolean

Description: Enable handling and storage of client-side ACLs

Parameter: useExtendedAttributes

Type: boolean

Description: Store metadata as extended attributes or not

Parameter: targetAttachmentFile

Type: string

Description: File with a list of tagrets to be grouped within the same domain for randominternode

Parameter: targetOfflineTimeout

Type: unsigned integer

Description: Timeout until tagrets on a storage server are considered offline when no target status is received

Parameter: allowUserSetPattern

Type: boolean

Description: Allow non-privileged users to modify stripe pattern settings for directories they own

Parameter: bindToNumaZone

Type: string

Description: Zero-based NUMA zone number to which all threads of metadata process should be bound

Parameter: numberOfStreamListeners

Type: unsigned integer

Description: The number of threads waiting for incoming data events

Parameter: numberOfWorkers

Type: unsigned integer

Description: Number of worker threads

Parameter: targetChooser

Type: string

Description: The algorithm to choose storage targets for file creation

Parameter: useAggressiveStreamPoll

Type: boolean

Description: Actively poll for events instead of sleeping until an event occur

Parameter: usePerUserMsgQueues

Type: boolean

Description: Use per-user queues for pending requests

5.2.22 BeeGFSSStorageRole : Role

parent : Role

Parameter: dataDirs

Type: list of strings

Description: Path to the data directories

Parameter: managementNode

Type: reference to Node

Description: Node with a management role

Parameter: authFile

Type: string

Description: Path to the shared secret authentication file

Parameter: backlogTCP

Type: unsigned integer

Description: TCP listen backlog

Parameter: interfacesFile

Type: string

Description: Path to the file with a list of interfaces for communication

Parameter: maxInternodeNumber

Type: unsigned integer

Description: Max number of simultaneous connections to the same node

Parameter: storagePortTCP

Type: unsigned integer

Description: TCP port for storage service

Parameter: storagePortUDP

Type: unsigned integer

Description: UDP port for storage service

Parameter: netFilterFile

Type: string

Description: Path to a file with a list of allowed IP subnets

Parameter: useRDMA

Type: boolean

Description: Use RDMA

Parameter: rdmaTypeOfService

Type: unsigned integer

Description: RDMA type of service

Parameter: tcpOnlyFilterFile

Type: string

Description: Path to a file with a list of no DRMA IP ranges

Parameter: logLevel

Type: unsigned integer

Description: Log level

Parameter: noLogDate

Type: boolean

Description: Do not show date along with time in log

Parameter: numberOfLogLines

Type: unsigned integer

Description: Number of lines in log file, after which it will be rotated

Parameter: numberOfLogRotatedFiles

Type: unsigned integer

Description: Number of old log files to keep

Parameter: logFile

Type: string

Description: Path to the log file, empty means logs go to the journal

Parameter: resyncSafetyThreshold

Type: unsigned integer

Description: Add an extra amount of time to the last successful communication timestamp, in case of a potential cache loss

Parameter: targetOfflineTimeout

Type: unsigned integer

Description: Timeout until tagrets on a storage server are considered offline when no target status is received

Parameter: bindToNumaZone

Type: string

Description: Zero-based NUMA zone number to which all threads of metadata process should be bound

Parameter: fileReadAheadSize

Type: string

Description: Byte range submitted to the kernel for read-ahead after number of bytes was already read from target

Parameter: fileReadAheadTriggerSize

Type: string

Description: Number of bytes after reading which the read-ahead is triggered

Parameter: fileReadSize

Type: string

Description: Maximum amount of data server should read in a single operation

Parameter: fileWriteSize

Type: string

Description: Maximum amount of data server should write in a single operation

Parameter: fileWriteSyncSize

Type: string

Description: Number of bytes after which kernel will be advised to commit data

Parameter: numberOfResyncGatherSlaves

Type: unsigned integer

Description: Number of threads to gather filesystem information for a buddy mirror resync

Parameter: numberOfResyncSlaves

Type: unsigned integer

Description: Number of threads to sync filesystem information for a buddy mirror resync

Parameter: numberOfStreamListeners

Type: unsigned integer

Description: Number of threads waiting for incoming data events

Parameter: numberOfWorkers

Type: unsigned integer

Description: Number of worker threads

Parameter: useAggressiveStreamPoll

Type: boolean

Description: Actively poll for events instead of sleeping until an event occur

Parameter: usePerTargetWorkers

Type: boolean

Description: Create a separate set of workers and attach it for each storage target

Parameter: usePerUserMsgQueues

Type: boolean

Description: Use per-user queues for pending requests

Parameter: workerBufferSize

Type: string

Description: Size of network and io buffers, allocated for each worker

5.2.23 BMCSettings : Entity

parent : Entity

Parameter: userName

Type: string

Description: Username used to send BMC commands

Parameter: userID

Type: integer

Description: User ID to send BMC commands

Parameter: password

Type: string

Description: Password used to send BMC commands

Parameter: powerResetDelay

Type: unsigned integer

Description: Delay used for BMC power reset, if set to > 0 power off; sleep X; power on is used

Parameter: extraArguments

Type: string

Description: Extra arguments passed to BMC commands

5.2.24 BootRole : Role

parent : Role

Parameter: nodegroups

Type: list of references to NodeGroup

Description: List of node groups which can boot from this node

Parameter: categories

Type: list of references to Category

Description: List of categories which can boot from this node

Parameter: racks

Type: list of references to Rack

Description: List of racks which can boot from this node

Parameter: softwareImages

Type: list of references to SoftwareImage

Description: List of software images from which can be booted, leave empty for all images

Parameter: allowRamdiskCreation

Type: boolean

Description: Allow the node to create ramdisks by itself, instead of waiting for them to be rsynced from the headnode

Parameter: disableAutomaticExports

Type: boolean

Description: Disable creation of automatic filesystem exports

Parameter: syncFSParts

Type: enum

Description: Sync FSParts mode

Parameter: fsparts

Type: list of references to FSPart

Description: FSParts

5.2.25 BurnConfig: Entity

parent : Entity

Parameter: name

Type: string

Description: A short name to identify this burn configuration.

Parameter: description

Type: string

Description: A more extensive description of this burn configuration.

Parameter: configuration

Type: string

Description: This XML data describes which burn tests should be used.

5.2.26 BurnStatus: Entity

parent : Entity

Parameter: refNodeUniqueKey

Type: unsigned integer

Description: Node

Parameter: startNewBurn

Type: boolean

Description: Starting new burn on next reboot

Parameter: burning

Type: boolean

Description: Currently burning

Parameter: information

Type: string

Description: Information

Parameter: configuration

Type: string

Description: Configuration

Parameter: error

Type: string

Description: Error message.

Parameter: warnings

Type: unsigned integer

Description: Number of warnings which have occurred so far.

Parameter: phaseName

Type: string

Description: Name of the current phase.

Parameter: phaseTime

Type: string

Description: Time past since the current phase was started.

Parameter: burnComplete

Type: string

Description: Set if the burn cycle has completed.

Parameter: burnFailed

Type: boolean

Description: Set if the burn cycle has failed.

Parameter: testStatusList

Type: list of BurnTestStatus

Description: *none*

Parameter: tag

Type: string

Description: Hardware tag.

5.2.27 BurnTestStatus : Entity

parent : Entity

Parameter: name

Type: string

Description: Test name.

Parameter: status

Type: string

Description: Test status.

Parameter: started

Type: boolean

Description: Indicates if test was started.

Parameter: passed

Type: boolean

Description: Indicates if test has passed.

Parameter: failed

Type: boolean

Description: Indicates if test has failed.

Parameter: warning

Type: boolean

Description: Indicates if test produced a warning.

5.2.28 Category : Entity

parent : Entity

Parameter: name

Type: string

Description: Name of category

Parameter: fsmounts

Type: list of FSMount

Description: Configure the entries placed in /etc/fstab

Parameter: staticRoutes

Type: list of StaticRoute

Description: Configure static routes for the interfaces

Parameter: roles

Type: list of Role

Description: Assign the roles the node should play

Parameter: notes

Type: string

Description: Administrator notes

Parameter: gpuSettings

Type: list of GPUSettings

Description: Configure the GPUs

Parameter: softwareImageProxy

Type: SoftwareImageProxy

Description: Software image the category will use

Parameter: defaultGateway

Type: IP

Description: Default gateway for the category

Parameter: nameServers

Type: list of strings

Description: List of name servers the category will use

Parameter: timeServers

Type: list of strings

Description: List of time servers the category will use

Parameter: searchDomains

Type: list of strings

Description: Search domains for the category

Parameter: disksetup

Type: string

Description: Node specific disk setup

Parameter: installMode

Type: string

Description: Installmode to be used by default, if none is specified in the node

Parameter: newNodeInstallMode

Type: string

Description: Installmode to be used by default, for new nodes

Parameter: excludeListFull

Type: string

Description: Exclude list for full install

Parameter: excludeListSync

Type: string

Description: Exclude list for sync install

Parameter: excludeListUpdate

Type: string

Description: Exclude list for update

Parameter: excludeListGrab

Type: string

Description: Exclude list for grabbing to an existing image

Parameter: excludeListGrabnew

Type: string

Description: Exclude list for grabbing to a new image

Parameter: initialize

Type: string

Description: Initialize script to be used for category

Parameter: finalize

Type: string

Description: Finalize script to be used for category

Parameter: raidconf

Type: string

Description: Node specific Hardware RAID configuration

Parameter: fsexports

Type: list of FSExport

Description: Configure the entries placed in /etc/exports

Parameter: services

Type: list of OSServiceConfig

Description: Manage operating system services

Parameter: bmcSettings

Type: BMCSettings or None

Description: Configure the baseboard management controller settings

Parameter: proxySettings

Type: ProxySettings or None

Description: Configure the proxy server settings

Parameter: nodeInstallerDisk

Type: boolean

Description: The node has it's own node installer disk

Parameter: installBootRecord

Type: boolean

Description: Install boot record on local disk

Parameter: managementNetwork

Type: reference to Network or None

Description: Determines what network should be used for management traffic. If not set, partition setting is used.

Parameter: ucsInfoConfigured

Type: UCSInfo or None

Description: Configure UCS Settings

Parameter: dellSettings

Type: DellSettings or None

Description: Dell Settings

Parameter: interactiveUser

Type: enum

Description: Allow user login on node

Parameter: fspartAssociations

Type: list of FSPartAssociation

Description: *none*

Parameter: dataNode

Type: boolean

Description: If enabled the node will never do a FULL install without explicit user confirmation

Parameter: `excludeListManipulateScript`

Type: `string`

Description: A user defined script that can be used to do custom last minute changes to the exclude lists used by `cmdaemon` to `rsync`

Parameter: `ioScheduler`

Type: `string`

Description: The I/O scheduler for the disks

Parameter: `useExclusivelyFor`

Type: `string`

Description: Use node exclusively for desired function: stop all other services

Parameter: `kernelVersion`

Type: `string`

Description: Kernel version used

Parameter: `kernelParameters`

Type: `string`

Description: Kernel parameters passed to the kernel at boot time

Parameter: `kernelOutputConsole`

Type: `string`

Description: Kernel output console used at boot time

Parameter: `modules`

Type: `list of KernelModule`

Description: Manage kernel modules loaded in this image

Parameter: `versionConfigFiles`

Type: `boolean`

Description: Keep old versions of all config files for all nodes in this category

Parameter: `bootLoader`

Type: `enum`

Description: Boot loader

Parameter: `bootLoaderProtocol`

Type: `enum`

Description: Boot loader protocol for retrieving `initrd` and `vmlinuz`

Parameter: `bootLoaderFile`

Type: `string`

Description: Alternative boot loader file

5.2.29 `CephMDSRole` : `Role`

parent : `Role`

Parameter: `mdsBeaconInterval`

Type: float

Description: The frequency (in seconds) of beacon messages sent to the monitor.

Parameter: mdsBeaconGrace

Type: float

Description: The interval without beacons before Ceph declares an MDS laggy (and possibly replace it).

Parameter: mdsTickInterval

Type: float

Description: How frequently the MDS performs internal periodic tasks.

Parameter: extraConfig

Type: list of strings

Description: Extra config parameters

5.2.30 CephMGRRole : Role

parent : Role

Parameter: modulePath

Type: string

Description: Path to load modules from

Parameter: dataPath

Type: string

Description: Path to load daemon data (such as keyring)

Parameter: beaconPeriod

Type: integer

Description: How many seconds between mgr beacons to monitors

Parameter: extraConfig

Type: list of strings

Description: Extra config parameters

5.2.31 CephMonitorRole : Role

parent : Role

Parameter: dataPath

Type: string

Description: Path to the Monitor data

Parameter: extraConfig

Type: list of strings

Description: Extra config parameters

5.2.32 CephOSDBlueStoreConfig : CephOSDConfig

parent : CephOSDConfig

Parameter: osdDevice

Type: string

Description: device to store OSD data

5.2.33 CephOSDConfig : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: extraConfig

Type: list of strings

Description: Extra config parameters

5.2.34 CephOSDFileStoreConfig : CephOSDConfig

parent : CephOSDConfig

Parameter: dataPath

Type: string

Description: Path to the OSD data

Parameter: osdDevice

Type: string

Description: Device for storing OSD data

Parameter: journalDevice

Type: string

Description: Device for storing journal data

Parameter: journalOnOSDPartition

Type: boolean

Description: Store the journal on a partition of the OSD device

Parameter: journalSize

Type: unsigned integer

Description: Journal size in MiB

5.2.35 CephOSDLegacyConfig : CephOSDConfig

parent : CephOSDConfig

Parameter: dataPath

Type: string

Description: Path to the OSD data

Parameter: journalPath

Type: string

Description: Path to the journal data

Parameter: journalSize

Type: unsigned integer

Description: Journal size in MiB

5.2.36 CephOSDPool : Entity

parent : Entity

Parameter: id

Type: unsigned integer

Description: Id

Parameter: name

Type: string

Description: Name

Parameter: size

Type: unsigned integer

Description: Number of replicas

Parameter: pgp_num

Type: unsigned integer

Description: Number of Placement Groups for Placement

Parameter: pg_num

Type: unsigned integer

Description: Number of Placement Groups

Parameter: pg_autoscale_mode

Type: enum

Description: Placement groups auto management mode

Parameter: crush_ruleset

Type: unsigned integer

Description: CRUSH Map Ruleset

Parameter: application

Type: string

Description: Associated application (typically one of rgw,rbd,cephfs)

Parameter: auid

Type: unsigned integer

Description: *none*

Parameter: min_size

Type: unsigned integer

Description: *none*

Parameter: crash_replay_interval

Type: unsigned integer

Description: *none*

Parameter: hit_set_type

Type: string

Description: *none*

Parameter: hashpspool

Type: unsigned integer

Description: *none*

Parameter: hit_set_count

Type: unsigned integer

Description: *none*

Parameter: hit_set_period

Type: unsigned integer

Description: *none*

Parameter: hit_set_fpp

Type: float

Description: *none*

Parameter: cache_target_dirty_ratio

Type: float

Description: *none*

Parameter: cache_target_full_ratio

Type: float

Description: *none*

Parameter: target_max_bytes

Type: unsigned integer

Description: *none*

Parameter: target_max_objects

Type: unsigned integer

Description: *none*

Parameter: cache_min_flush_age

Type: unsigned integer

Description: *none*

Parameter: cache_min_evict_age

Type: unsigned integer

Description: *none*

Parameter: extraField1

Type: string

Description: *none*

Parameter: extraField2

Type: integer

Description: *none*

Parameter: extraField3

Type: unsigned integer

Description: *none*

Parameter: extraField4

Type: float

Description: *none*

Parameter: extraField5

Type: list of strings

Description: *none*

Parameter: extraField6

Type: list of unsigned numbers

Description: *none*

5.2.37 CephOSDRole : Role

parent : Role

Parameter: osdconfigs

Type: list of CephOSDConfig

Description: OSD configurations

Parameter: extraConfig

Type: list of strings

Description: *none*

5.2.38 CephState : Entity

parent : Entity

Parameter: version

Type: unsigned integer

Description: *none*

Parameter: cephNodeKeys

Type: list of unsigned numbers

Description: *none*

Parameter: cephNodeValues

Type: list of signed numbers

Description: *none*

Parameter: OSDMapIds

Type: list of unsigned numbers

Description: *none*

Parameter: OSDMapNodes

Type: list of unsigned numbers

Description: *none*

Parameter: OSDMapConfigs

Type: list of unsigned numbers

Description: *none*

Parameter: OSDMapConfigNames

Type: list of strings

Description: *none*

Parameter: OSDMapStatuses

Type: list of unsigned numbers

Description: to mark status (e.g. NEED_DELETE) using numeric constants

Parameter: OSDMapDevices

Type: list of strings

Description: in case we need to keep track of changing device names

Parameter: extraField1

Type: string

Description: *none*

Parameter: extraField2

Type: string

Description: *none*

Parameter: extraField3

Type: string

Description: *none*

Parameter: extraField4

Type: string

Description: *none*

Parameter: extraField5

Type: string

Description: *none*

Parameter: extraList1

Type: list of strings

Description: *none*

Parameter: extraList2

Type: list of strings

Description: *none*

Parameter: `extraList3`

Type: list of unsigned numbers

Description: *none*

Parameter: `extraList4`

Type: list of unsigned numbers

Description: *none*

Parameter: `extraList5`

Type: list of unsigned numbers

Description: *none*

5.2.39 Ceph : Entity

parent : Entity

Parameter: `name`

Type: string

Description: Name

Parameter: `fsid`

Type: string

Description: Ceph ID

Parameter: `configFilePath`

Type: string

Description: Path to the Ceph config file

Parameter: `adminKeyringFilePath`

Type: string

Description: Path to the Ceph admin keyring file

Parameter: `monitorKeyringFilePath`

Type: string

Description: Path to the Ceph monitor keyring file

Parameter: `adminKey`

Type: string

Description: Ceph client admin key

Parameter: `monitorKey`

Type: string

Description: Ceph monitor key

Parameter: `publicNetworks`

Type: list of references to Network

Description: Public networks

Parameter: clusterNetworks

Type: list of references to Network

Description: Cluster networks

Parameter: creationTime

Type: timestamp

Description: Date on which the Ceph was defined

Parameter: setupState

Type: enum

Description: Flag to keep track of the installation state

Parameter: version

Type: string

Description: Ceph version of the cluster

Parameter: monmap

Type: string

Description: *none*

Parameter: bootstrapped

Type: boolean

Description: Bootstrapped

Parameter: monitorPortV1

Type: unsigned integer

Description: Monitor daemon port

Parameter: monitorPortV2

Type: unsigned integer

Description: Monitor daemon port (msg2)

Parameter: filestoreXattrUseOmap

Type: boolean

Description: filestore xattr use omap

Parameter: monAllowPoolDelete

Type: boolean

Description: mon allow pool delete

Parameter: monOsdFullRatio

Type: float

Description: mon osd full ratio

Parameter: monOsdNearfullRatio

Type: float

Description: mon osd nearfull ratio

Parameter: monMaxOsd

Type: unsigned integer

Description: mon max osd

Parameter: osdPoolDefaultSize

Type: unsigned integer

Description: osd pool default size

Parameter: osdPoolDefaultMinSize

Type: unsigned integer

Description: osd pool default min size

Parameter: osdPoolDefaultPgNum

Type: unsigned integer

Description: osd pool default pg num

Parameter: osdPoolDefaultPgpNum

Type: unsigned integer

Description: osd pool default pgp num

Parameter: authClusterCephx

Type: boolean

Description: auth cluster required cephx

Parameter: authServiceCephx

Type: boolean

Description: auth service required cephx

Parameter: authClientCephx

Type: boolean

Description: auth client required cephx

Parameter: extraConfig

Type: list of strings

Description: Extra config parameters

Parameter: autoAdjustCrushMap

Type: boolean

Description: Automatically Adjust CRUSH Map

Parameter: rbdCache

Type: boolean

Description: Enable caching for RADOS Block Device (RBD).

Parameter: rbdCacheSize

Type: unsigned integer

Description: The RBD cache size in bytes.

Parameter: rbdCacheMaxDirty

Type: unsigned integer

Description: The dirty limit in bytes at which the cache triggers write-back. If 0, uses write-through caching. Constraint: Must be less than rbd cache size.

Parameter: rbdCacheTargetDirty

Type: unsigned integer

Description: The dirty target before the cache begins writing data to the data storage. Does not block writes to the cache. Constraint: Must be less than rbd cache max dirty.

Parameter: rbdCacheMaxDirtyAge

Type: float

Description: The number of seconds dirty data is in the cache before writeback starts.

Parameter: rbdCacheWritethroughUntilFlush

Type: boolean

Description: Start out in write-through mode, and switch to write-back after the first flush request is received.

Parameter: rbdReadaheadTriggerRequests

Type: integer

Description: Number of sequential read requests necessary to trigger read-ahead.

Parameter: rbdReadaheadMaxBytes

Type: unsigned integer

Description: Maximum size of a read-ahead request. If zero, read-ahead is disabled.

Parameter: rbdReadaheadDisableAfterBytes

Type: unsigned integer

Description: After this many bytes have been read from an RBD image, read-ahead is disabled for that image until it is closed. If zero, read-ahead stays enabled.

5.2.40 CertificateInfo : Entity

parent : Entity

Parameter: certificate

Type: Certificate

Description: Certificate

Parameter: private_key

Type: string

Description: Optional private key field.

5.2.41 CertificateRequest : Entity

parent : Entity

Parameter: CSR

Type: string

Description: *none*

Parameter: sessionId

Type: unsigned integer

Description: Session id

Parameter: clientType

Type: unsigned integer

Description: Client type

Parameter: requestId

Type: unsigned integer

Description: Request id

Parameter: country

Type: string

Description: Country

Parameter: state

Type: string

Description: State

Parameter: locality

Type: string

Description: Locality

Parameter: organization

Type: string

Description: Organization

Parameter: organizationalUnit

Type: string

Description: Organizational unit

Parameter: commonName

Type: string

Description: Common name

Parameter: subjectAlternativeNames

Type: list of strings

Description: Subject alternative names

Parameter: allowAutosign

Type: boolean

Description: Allow autosign

Parameter: hasEdgeSecret
Type: boolean
Description: Has an edge secret

5.2.42 CertificateSubjectName : Entity

parent : Entity
Parameter: country
Type: string
Description: Country

Parameter: state
Type: string
Description: State

Parameter: locality
Type: string
Description: Locality

Parameter: organization
Type: string
Description: Organization

Parameter: organizationalUnit
Type: string
Description: Organizational unit

Parameter: commonName
Type: string
Description: CommonName

Parameter: profile
Type: string
Description: Profile

Parameter: syslogIn
Type: string
Description: Syslogin

Parameter: component
Type: string
Description: Component

Parameter: days
Type: integer
Description: Days

Parameter: ca

Type: boolean

Description: CA

Parameter: subjectAlternativeNames

Type: list of strings

Description: Alternative names

5.2.43 Certificate:Entity

parent: Entity

Parameter: PEM

Type: string

Description: *none*

Parameter: revoked

Type: boolean

Description: Certificate has been revoked and can not be used

Parameter: serialNumber

Type: integer

Description: Serial number

Parameter: remaining

Type: integer

Description: Remaining time until certificate expires

Parameter: startTime

Type: timestamp

Description: Date when certificate is valid

Parameter: expireTime

Type: timestamp

Description: Date when certificate expires

Parameter: CA

Type: boolean

Description: A CA certificate can be used sign other certificates

Parameter: hasEdgeSecret

Type: boolean

Description: Has an edge secret

Parameter: profile

Type: string

Description: Profile

Parameter: sysLogin

Type: string

Description: System log in

Parameter: component

Type: string

Description: Component

Parameter: subjectName

Type: string

Description: Subject

Parameter: issuerName

Type: string

Description: Issuer

Parameter: subjectAlternativeNames

Type: list of strings

Description: Alternative names

Parameter: country

Type: string

Description: Country

Parameter: state

Type: string

Description: State

Parameter: locality

Type: string

Description: Locality

Parameter: organization

Type: string

Description: Organization

Parameter: organizationalUnit

Type: string

Description: Organizational unit

Parameter: commonName

Type: string

Description: Name

5.2.44 Chassis : Device

parent : Device

Parameter: ip

Type: IP

Description: Ip address

Parameter: network
Type: reference to Network or None
Description: Network to which this switch is connected

Parameter: model
Type: string
Description: Device model name

Parameter: username
Type: string
Description: Chassis username

Parameter: password
Type: string
Description: Chassis password

Parameter: members
Type: list of references to Device
Description: List of devices belonging to this chassis

Parameter: slots
Type: list of strings
Description: Slot description per device in chassis

Parameter: layout
Type: string
Description: Layout definition for rackview (Format: [|-]x,y e.g: |8,3 or -2,6)

5.2.45 CloudDirectorRole : DirectorRole

parent : DirectorRole
Parameter: dependents
Type: reference to NodeGroup or None
Description: List of nodes that depend on this cloud director

5.2.46 CloudGatewayRole : Role

parent : Role

5.2.47 CloudImage : Entity

parent : Entity
Parameter: name
Type: string
Description: The name of the image.

Parameter: provider
Type: reference to CloudProvider
Description: Cloud provider

Parameter: version
Type: string

Description: The version of the image.

Parameter: description

Type: string

Description: The description.

5.2.48 CloudJobDescription : Entity

parent : Entity

Parameter: name

Type: string

Description: Job name

Parameter: script

Type: string

Description: Script path

Parameter: workloadManagerJobId

Type: string

Description: Job identifier according to the workload manager

Parameter: user

Type: string

Description: Owner of a job

Parameter: sizeOfInputData

Type: unsigned integer

Description: Size of job's input data

Parameter: sizeOfOutputData

Type: unsigned integer

Description: Size of job's output data

Parameter: expectedSizeOfOutputData

Type: unsigned integer

Description: Expected size of job's output data

Parameter: inputFiles

Type: list of strings

Description: Input files list

Parameter: expandedInputFiles

Type: list of strings

Description: Internal list of input files after labeled wildcards are resolved

Parameter: outputFiles

Type: list of strings

Description: Output files list

Parameter: doNotDownloadFiles

Type: list of strings

Description: List of output files to leave in the cloud without downloading

Parameter: remoteOutputLists

Type: list of strings

Description: List of remote files which contain job output file names

Parameter: workloadManager

Type: string

Description: Workload manager type

Parameter: workingDirectory

Type: string

Description: Job's working directory

Parameter: region

Type: string

Description: Cloud region

Parameter: jobQueue

Type: string

Description: WLM queue where the job runs

Parameter: storageStrategy

Type: enum

Description: *none*

Parameter: storageVolumeId

Type: string

Description: Storage Volume ID

Parameter: storageVolumeSize

Type: unsigned integer

Description: Size of Storage Volume

Parameter: storageVolumeDevicePath

Type: string

Description: OS device path

Parameter: fsxInstanceId

Type: string

Description: *none*

Parameter: fsxInstanceUrl

Type: string

Description: *none*

Parameter: fsxInstancePathOnDirector

Type: string

Description: *none*

Parameter: anfVolumeId

Type: string

Description: *none*

Parameter: anfVolumeUrl

Type: string

Description: *none*

Parameter: anfVolumePathOnDirector

Type: string

Description: *none*

Parameter: jobType

Type: enum

Description: Defines the set of operations that will run on job.

Parameter: storageNode

Type: reference to CloudNode

Description: Storage Node

Parameter: excludedStorageNodes

Type: list of references to CloudNode

Description: Job will not run on those nodes

Parameter: stdoutFileNames

Type: list of strings

Description: Standard output stream filenames list

Parameter: stderrFileNames

Type: list of strings

Description: Standard error stream filenames list

Parameter: uploadTime

Type: float

Description: Time spent on input data transfer and job pre-run preparations

Parameter: downloadTime

Type: float

Description: Time spent on jobs job results transfer and post-run activities

Parameter: maxUploadTime

Type: float

Description: *none*

Parameter: maxDownloadTime

Type: float

Description: *none*

Parameter: jobStatus

Type: string

Description: Job status

Parameter: jobStatusTimestamp

Type: timestamp

Description: Time when the job status was last changed

Parameter: computeNodes

Type: list of references to Node

Description: List of compute nodes the job was running on

Parameter: numThreads

Type: unsigned integer

Description: *none*

Parameter: submissionTimestamp

Type: timestamp

Description: Time when the job was submitted

Parameter: endTimestamp

Type: timestamp

Description: Time when the job finished execution

Parameter: extraOptions

Type: list of strings

Description: *none*

5.2.49 CloudJobSubmissionStatus : Entity

parent : Entity

Parameter: availableExpectedTransferTimes

Type: boolean

Description: *none*

Parameter: expectedInputDataTransferTimeInSeconds

Type: unsigned integer

Description: *none*

Parameter: jobName

Type: string

Description: *none*

Parameter: `errMsg`

Type: `string`

Description: *none*

Parameter: `extraOptions`

Type: `list of strings`

Description: *none*

5.2.50 `CloudNode : ComputeNode`

parent : `ComputeNode`

Parameter: `cloudSettings`

Type: `CloudSettings`

Description: Submode containing all cloud node settings

5.2.51 `CloudProvider : Entity`

parent : `Entity`

Parameter: `name`

Type: `string`

Description: Name

Parameter: `tags`

Type: `list of strings`

Description: List of tags that will be assigned to all resources created by BCM under this cloud provider

5.2.52 `CloudRegion : Entity`

parent : `Entity`

Parameter: `name`

Type: `string`

Description: The name of the cloud region.

Parameter: `provider`

Type: `reference to CloudProvider`

Description: Cloud provider

5.2.53 `CloudSettings : Entity`

parent : `Entity`

Parameter: `provider`

Type: `reference to CloudProvider`

Description: Cloud provider

Parameter: `externalIP`

Type: `IP`

Description: The external IP address as set by the cloudprovider

Parameter: `releaseStaticIPOnTermination`

Type: `boolean`

Description: Release Static IP on termination of the instance

Parameter: `isStorageTemplate`

Type: boolean

Description: *none*

Parameter: `isStorageNode`

Type: boolean

Description: *none*

Parameter: `tags`

Type: list of strings

Description: List of tags that will be assigned to cloud instance

Parameter: `useKernelAndInitrdFromTheSoftwareImage`

Type: boolean

Description: Make the cloud node's node-installer download the kernel and the initrd from the software image configured for this cloud node and then reboot the cloud node to use those, instead of using the kernel and initrd already present on the node-installer's cloud image.

5.2.54 `CloudStorageActionData` : Entity

parent : Entity

Parameter: `jobDescription`

Type: reference to `CloudJobDescription`

Description: *none*

Parameter: `typeString`

Type: string

Description: *none*

Parameter: `index`

Type: unsigned integer

Description: *none*

Parameter: `totalActions`

Type: unsigned integer

Description: *none*

Parameter: `status`

Type: enum

Description: *none*

Parameter: `errorMessage`

Type: string

Description: *none*

Parameter: `isReverse`

Type: boolean

Description: *none*

Parameter: timeoutSecs

Type: unsigned integer

Description: *none*

Parameter: startTime

Type: timestamp

Description: *none*

Parameter: retries

Type: unsigned integer

Description: *none*

Parameter: workloadManager

Type: string

Description: *none*

Parameter: workloadManagerJobId

Type: string

Description: *none*

Parameter: jobName

Type: string

Description: *none*

Parameter: executionNode

Type: reference to Node

Description: *none*

Parameter: extraOptions

Type: list of strings

Description: *none*

5.2.55 CloudType : Entity

parent : Entity

Parameter: name

Type: string

Description: The name of the VM type.

Parameter: provider

Type: reference to CloudProvider

Description: Cloud provider

Parameter: cpu

Type: string

Description: The amount of CPU cores.

Parameter: gpu

Type: string

Description: The amount of GPUs.

Parameter: memory

Type: string

Description: The amount of operating system memory.

Parameter: disks

Type: string

Description: AWS: The amount of disks comming with the type. Azure: the maximum amount of data disk which can be attached to the VMs of this type.

Parameter: description

Type: string

Description: The description.

5.2.56 ClusterSetup : Entity

parent : Entity

Parameter: refPartitionUniqueKey

Type: unsigned integer

Description: Partition

Parameter: CMID

Type: unsigned integer

Description: CMID

Parameter: databaseVersion

Type: unsigned integer

Description: Database version

Parameter: organization

Type: string

Description: Organization

Parameter: powerOnDelay

Type: float

Description: Delay in seconds between powering on nodes

Parameter: powerOffDelay

Type: float

Description: Delay in seconds between powering off nodes

5.2.57 CMDaemonBackgroundTask : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: subjects

Type: list of unsigned numbers

Description: Subjects

Parameter: updates

Type: list of strings

Description: Updates

Parameter: exitCode

Type: integer

Description: Exit code

Parameter: runningStatus

Type: enum

Description: Running status

Parameter: startTime

Type: timestamp

Description: Start time

Parameter: endTime

Type: timestamp

Description: End time

Parameter: isCancelable

Type: boolean

Description: Cancelable

Parameter: parentTask

Type: unsigned integer

Description: Parent task

Parameter: subtasks

Type: list of unsigned numbers

Description: Sub tasks

Parameter: nodeKey

Type: unsigned integer

Description: Node key

5.2.58 CMDaemonFailoverGroupStatus : Entity

parent : Entity

Parameter: failoverStage

Type: integer

Description: Failover stage

Parameter: `activeNodeKey`
Type: unsigned integer
Description: Active node key

Parameter: `activeUpTime`
Type: timestamp
Description: Active up time

Parameter: `activeDownTime`
Type: timestamp
Description: Active down time

Parameter: `activeUpCount`
Type: unsigned integer
Description: Active up count

Parameter: `failoverThreadRunning`
Type: boolean
Description: Failover thread running

Parameter: `infoMessage`
Type: string
Description: Information messages gather during the last failover

Parameter: `errorMessage`
Type: string
Description: Error messages gather during the last failover

Parameter: `activeGraciousShutdown`
Type: boolean
Description: True if the previous active head reported a graceful shutdown

5.2.59 `CMDaemonFailoverGroup` : Entity

parent : Entity
Parameter: `name`
Type: string
Description: Name

Parameter: `nodes`
Type: list of references to `ComputeNode`
Description: List of nodes belonging to this group

Parameter: `alsoTakeOverAfterGraciousShutdown`
Type: boolean
Description: Also perform automatic failover if the active group member was gracefully shut down

Parameter: `disableAutomaticFailover`

Type: boolean

Description: When automatic failover is disabled the no node in the group will not take over if the active node is dead

Parameter: warntime

Type: unsigned integer

Description: How quickly to issue a 'late' warning

Parameter: deadtime

Type: unsigned integer

Description: How quickly to decide that a node in a group is dead

Parameter: mountScript

Type: string

Description: Script that mounts the shared storage device when a node becomes the active head node

Parameter: unmountScript

Type: string

Description: Script that unmounts the shared storage device when a node stoppes being the active head node

Parameter: preFailoverScript

Type: string

Description: Prefailover script will be run on all nodes before failover has begun

Parameter: postFailoverScript

Type: string

Description: Postfailover script will be run on all nodes after failover has completed

5.2.60 `CMDaemonFailoverPeer : Entity`

parent : Entity

Parameter: key

Type: unsigned integer

Description: Node key

Parameter: status

Type: list of strings

Description: Status

Parameter: failCount

Type: list of unsigned numbers

Description: Number of sequential times failure was detected

5.2.61 `CMDaemonFailoverStatus : Entity`

parent : Entity

Parameter: myKey

Type: unsigned integer

Description: Unique key of head node to which handed request

Parameter: `masterKey`

Type: unsigned integer

Description: Unique key of active head node

Parameter: `masterTime`

Type: unsigned integer

Description: Master time (not used)

Parameter: `failoverId`

Type: unsigned integer

Description: Head node with the highest failover ID will be active

Parameter: `error`

Type: boolean

Description: Head node is in error state

Parameter: `peers`

Type: list of `CMDaemonFailoverPeer`

Description: Peer status per head node in the failover group

5.2.62 `CMDaemonFailover:Entity`

parent: `Entity`

Parameter: `secondaryHeadNode`

Type: reference to `HeadNode` or `None`

Description: Secondary/failover head node

Parameter: `keepalive`

Type: unsigned integer

Description: Interval between pings

Parameter: `warntime`

Type: unsigned integer

Description: How quickly to issue a 'late' warning

Parameter: `deadtime`

Type: unsigned integer

Description: How quickly to decide that a node in a cluster is dead

Parameter: `initdead`

Type: unsigned integer

Description: Time between starting failover and declaring a cluster node dead

Parameter: `quorumTime`

Type: unsigned integer

Description: Time before deciding quorum ended in failure

Parameter: mountScript

Type: string

Description: Script that mounts the shared storage device when a node becomes the active headnode

Parameter: unmountScript

Type: string

Description: Script that unmounts the shared storage device when a node stoppes being the active headnode

Parameter: failoverNetwork

Type: reference to Network or None

Description: Network for failover ping

Parameter: disableAutomaticFailover

Type: boolean

Description: When automatic failover is disabled the passive headnode will not take over if it detects the active headnode is dead

Parameter: preFailoverScript

Type: string

Description: Prefailover script will be run on both headnodes before failover has begun

Parameter: postFailoverScript

Type: string

Description: Postfailover script will be run on both headnodes after failover has completed

5.2.63 CMDaemonStatus : Entity

parent : Entity

Parameter: version

Type: string

Description: CMDaemon version

Parameter: state

Type: string

Description: CMDaemon state

Parameter: myTime

Type: timestamp

Description: System time

Parameter: startTime

Type: timestamp

Description: CMDaemon start time

Parameter: uptime

Type: unsigned integer

Description: System uptime

Parameter: `utime`

Type: `float`

Description: User time spend by CMDaemon

Parameter: `stime`

Type: `float`

Description: System time spend by CMDaemon

Parameter: `memused`

Type: `unsigned integer`

Description: Memory used by CMDaemon

Parameter: `sessionCount`

Type: `unsigned integer`

Description: Total Number of `cmsh/Bright View/python/node` sessions

Parameter: `activeSessionCount`

Type: `unsigned integer`

Description: Number of currently active sessions

Parameter: `httpdNumWorkers`

Type: `unsigned integer`

Description: Number of threads handing http requests

Parameter: `httpdNumFreeWorkers`

Type: `unsigned integer`

Description: Number of threads free to handle http requests

Parameter: `httpdConnectionCounter`

Type: `unsigned integer`

Description: Total number of http connections handled by CMDaemon

Parameter: `httpdRequestCounter`

Type: `unsigned integer`

Description: Total number of http request handled by CMDaemon

Parameter: `httpdBytesRead`

Type: `unsigned integer`

Description: Bytes read from http request

Parameter: `httpdBytesWritten`

Type: `unsigned integer`

Description: Bytes written in response to http requests

5.2.64 `CMJobConfig:Entity`

parent: `Entity`

Parameter: `name`

Type: string

Description: CMJob config name

Parameter: storageNodePolicies

Type: list of StorageNodePolicy

Description: Storage node policies

Parameter: activeStorageNodePolicy

Type: element of storageNodePolicies or None

Description: This policy will be used to start new storage nodes

Parameter: extraOptions

Type: list of strings

Description: Extra options

5.2.65 CMJobIntermediateStorage : Entity

parent : Entity

5.2.66 CMService : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: tokens

Type: list of strings

Description: Tokens belonging to this service

5.2.67 ComputeNode : Node

parent : Node

Parameter: installMode

Type: string

Description: Installmode to be used by default, if empty use category installMode

Parameter: nextBootInstallMode

Type: string

Description: Installmode to be used during the next boot

Parameter: blockDevicesClearedOnNextBoot

Type: list of strings

Description: List of block devices that will be cleared during the next boot

Parameter: initialize

Type: string

Description: Node specific initialize script

Parameter: finalize

Type: string

Description: Node specific finalize script

Parameter: raidconf

Type: string

Description: Node specific Hardware RAID configuration

Parameter: category

Type: reference to Category

Description: Category to which this node belongs

Parameter: disksetup

Type: string

Description: Node specific disk setup

Parameter: excludeListFull

Type: string

Description: Exclude list for full install

Parameter: excludeListSync

Type: string

Description: Exclude list for sync install

Parameter: excludeListUpdate

Type: string

Description: Exclude list for update

Parameter: excludeListGrab

Type: string

Description: Exclude list for grabbing to an existing image

Parameter: excludeListGrabnew

Type: string

Description: Exclude list for grabbing to a new image

Parameter: nodeInstallerDisk

Type: boolean

Description: The node has it's own node installer disk

Parameter: installBootRecord

Type: boolean

Description: Install boot record on local disk

Parameter: managementNetwork

Type: reference to Network or None

Description: Determines what network should be used for management traffic. If not set, category or partition setting is used.

Parameter: dataNode

Type: boolean

Description: If enabled the node will never do a FULL install without explicit user confirmation

Parameter: softwareImageProxy

Type: SoftwareImageProxy or None

Description: Software image used by node

Parameter: fspartAssociations

Type: list of FSPartAssociation

Description: *none*

Parameter: kernelVersion

Type: string

Description: Kernel version used

Parameter: kernelParameters

Type: string

Description: Kernel parameters passed to the kernel at boot time

Parameter: kernelOutputConsole

Type: string

Description: Kernel output console used at boot time

Parameter: modules

Type: list of KernelModule

Description: Manage kernel modules loaded in this node

Parameter: bootLoader

Type: enum

Description: Boot loader

Parameter: bootLoaderProtocol

Type: enum

Description: Boot loader protocol for retrieving initrd and vmlinuz

Parameter: bootLoaderFile

Type: string

Description: Alternative boot loader file

5.2.68 ConfigFileVersion : Entity

parent : Entity

Parameter: nodeKey

Type: unsigned integer

Description: Node key

Parameter: filename

Type: string

Description: File name

Parameter: content

Type: string

Description: Content of the file

Parameter: creationTime

Type: timestamp

Description: Creation time

5.2.69 ConfigurationOverlay : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: allHeadNodes

Type: boolean

Description: All head nodes

Parameter: nodes

Type: list of references to Node

Description: List of nodes belonging to this group

Parameter: categories

Type: list of references to Category

Description: List of categories belonging to this group

Parameter: customizationFiles

Type: list of CustomizationFile

Description: Config file customizations

Parameter: roles

Type: list of Role

Description: Assign the roles

Parameter: priority

Type: integer

Description: Priority of the roles, node roles have a 750 priority, and category roles 250

5.2.70 ConnectivityCheckerSubSystemInfo : SubSystemInfo

parent : SubSystemInfo

Parameter: stopped

Type: unsigned integer

Description: Stopped

Parameter: updateCallback

Type: unsigned integer

Description: Update callback defined

Parameter: changeCallback

Type: unsigned integer

Description: Change callback defined

Parameter: ttl

Type: unsigned integer

Description: ttl

Parameter: idOffset

Type: unsigned integer

Description: Ping ID offset

Parameter: interval

Type: unsigned integer

Description: Interval

Parameter: timeout

Type: unsigned integer

Description: Timeout

Parameter: sequence

Type: unsigned integer

Description: Sequence ID

Parameter: activeSequences

Type: unsigned integer

Description: Active ping sequences still being waited for

Parameter: activeNodeSequences

Type: unsigned integer

Description: Number of nodes in active ping sequences still being waited for

Parameter: nodes

Type: unsigned integer

Description: Nodes being pinged

Parameter: nodeSequences

Type: unsigned integer

Description: Number of pings nodes are waiting for

Parameter: updates

Type: unsigned integer

Description: Total number of handled updates

Parameter: changes

Type: unsigned integer

Description: Total number of handled changes

5.2.71 Consolidator : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: maxAge

Type: float

Description: Maximal age of historic data, 0 for infinite

Parameter: maxSamples

Type: unsigned integer

Description: Maximal samples of historic data, 0 for infinite

Parameter: interval

Type: float

Description: Sampling interval

Parameter: offset

Type: float

Description: Time offset for sampling interval

Parameter: kind

Type: enum

Description: Kind of consolidation to be done

5.2.72 ContainerInfo : Entity

parent : Entity

Parameter: name

Type: string

Description: The name of the container

Parameter: containerId

Type: string

Description: The id

Parameter: image

Type: string

Description: The name of the image

Parameter: imageId

Type: string

Description: The sha id of the image

Parameter: state

Type: string

Description: The state of the container

Parameter: startTime

Type: timestamp

Description: The time when the container started

Parameter: lastTerminationState

Type: string

Description: The last state when the container terminated

Parameter: reason

Type: string

Description: The reason for the termination

Parameter: lastExitCode

Type: integer

Description: The exit code of the container

Parameter: previousStartTime

Type: timestamp

Description: The previous start time

Parameter: previousFinishTime

Type: timestamp

Description: The previous finish time

Parameter: ready

Type: boolean

Description: Whether the container is ready or not

Parameter: restartCount

Type: integer

Description: The number of restarts of the container

Parameter: environmentVariables

Type: list of strings

Description: The environment variables passed to the container

5.2.73 CustomizationEntry : Entity

parent : Entity

Parameter: key

Type: string

Description: Name of the key

Parameter: value

Type: string

Description: Value for the key

Parameter: enabled

Type: boolean

Description: *none*

Parameter: action

Type: enum

Description: Determines how entries are added

Parameter: formatting

Type: string

Description: *none*

Parameter: extraField

Type: boolean

Description: Reserved for future use

Parameter: separator

Type: string

Description: *none*

5.2.74 CustomizationFile:Entity

parent: Entity

Parameter: name

Type: string

Description: *none*

Parameter: entries

Type: list of CustomizationEntry

Description: Config file customization entries

Parameter: label

Type: string

Description: *none*

Parameter: type

Type: enum

Description: Determines file type

Parameter: managedsection

Type: enum

Description: Determines how cmdaemon should customize the file

Parameter: formatting

Type: string

Description: *none*

Parameter: enabled

Type: boolean

Description: *none*

5.2.75 DellSettingsFirmware : Entity

parent : Entity

Parameter: path

Type: string

Description: Path

Parameter: ftpUser

Type: string

Description: FTP user

Parameter: ftpPassword

Type: string

Description: FTP password

Parameter: clearConfig

Type: boolean

Description: Clear config

5.2.76 DellSettings : Entity

parent : Entity

Parameter: applyImmediately

Type: boolean

Description: Apply Immediately

Parameter: modelName

Type: string

Description: Model Name

Parameter: serviceTag

Type: string

Description: Service Tag

Parameter: nodeInterleaving

Type: boolean

Description: Node Interleaving

Parameter: snoopMode

Type: enum

Description: Snoop Mode

Parameter: logicalProcessor

Type: boolean

Description: Logical Processor

Parameter: biosBootOrder

Type: string

Description: Bios Boot Order

Parameter: devicefirmware

Type: DellSettingsFirmware or None

Description: Device firmware

Parameter: sysprofile

Type: enum

Description: System profile

Parameter: mmioAbove4Gb

Type: boolean

Description: Mmio Above 4Gb

Parameter: ioNonPostedPrefetch

Type: boolean

Description: IO Non Posted Prefetch

Parameter: workloadProfile

Type: enum

Description: Workload Profile

Parameter: subNumaCluster

Type: boolean

Description: Sub Numa Cluster

5.2.77 DeviceStatus : Entity

parent : Entity

Parameter: refDeviceUniqueKey

Type: unsigned integer

Description: Device

Parameter: status

Type: enum

Description: Status determined by ping and report

Parameter: reportedStatus

Type: enum

Description: Reported status

Parameter: reportedStatusTimestamp

Type: unsigned integer

Description: Reported status timestamp in steady clock epoch milliseconds

Parameter: terminated

Type: boolean

Description: *none*

Parameter: closed

Type: boolean

Description: *none*

Parameter: muted

Type: boolean

Description: *none*

Parameter: burning

Type: boolean

Description: *none*

Parameter: nullIdentifier

Type: boolean

Description: *none*

Parameter: additionalCost

Type: boolean

Description: *none*

Parameter: restartRequired

Type: boolean

Description: *none*

Parameter: healthCheckFailed

Type: boolean

Description: *none*

Parameter: healthCheckUnknown

Type: boolean

Description: *none*

Parameter: provisioningFailed

Type: boolean

Description: *none*

Parameter: stateFlapping

Type: boolean

Description: *none*

Parameter: stateFlappingCheckTime

Type: unsigned integer

Description: *none*

Parameter: pingable

Type: boolean

Description: *none*

Parameter: sshable

Type: boolean

Description: *none*

Parameter: infoMessage

Type: string

Description: *none*

Parameter: userMessage

Type: string

Description: *none*

Parameter: toolMessage

Type: string

Description: *none*

Parameter: restartRequiredReasons

Type: list of strings

Description: *none*

Parameter: gracePeriod

Type: unsigned integer

Description: *none*

Parameter: powerResetOnUnreachableCount

Type: unsigned integer

Description: *none*

Parameter: failBeforeDown

Type: unsigned integer

Description: *none*

Parameter: updateIndex

Type: unsigned integer

Description: *none*

Parameter: updateDisplay

Type: boolean

Description: *none*

Parameter: hasClientDaemon

Type: boolean

Description: *none*

5.2.78 Device : Entity

parent : Entity

Parameter: tag

Type: string

Description: Hardware tag

Parameter: hostname

Type: string

Description: Hostname

Parameter: mac

Type: MAC

Description: MAC address

Parameter: defaultGateway

Type: IP

Description: Default gateway for the device

Parameter: creationTime

Type: timestamp

Description: Date on which node was defined

Parameter: partition

Type: reference to Partition

Description: Partition to which this device belongs

Parameter: ethernetSwitch

Type: SwitchPort or None

Description: Ethernet switch

Parameter: powerDistributionUnits

Type: list of PDUPort

Description: List of outlets on powerdistributionunits

Parameter: rack

Type: RackPosition or None

Description: Name of the rack in which the device resides

Parameter: indexInsideContainer

Type: unsigned integer

Description: Index inside container object (used for drawing twins/chassis inside rackview)

Parameter: powerControl

Type: string

Description: Specifies which type of power control feature is being used (values: none, apc, custom, cloud, ipmi0, ilo0, drac0, rf0 or cimc0, openstack)

Parameter: customPowerScript

Type: string

Description: Script that will be used to perform power on/off/reset/status operations

Parameter: customPowerScriptArgument

Type: string

Description: Argument for the custom power script

Parameter: customPingScript

Type: string

Description: Script that will be used to ping a device

Parameter: customPingScriptArgument

Type: string

Description: Argument for the custom ping script

Parameter: notes

Type: string

Description: Administrator notes

Parameter: userdefined1

Type: string

Description: A free text field passed to custom scripts

Parameter: userdefined2

Type: string

Description: A free text field passed to custom scripts

Parameter: userDefinedResources

Type: list of strings

Description: User defined resources used to filter monitoring data producers

5.2.79 DIGITSRole : Role

parent : Role

Parameter: version

Type: string

Description: DIGITS version

Parameter: port

Type: unsigned integer

Description: DIGITS port

Parameter: jobsDir

Type: string

Description: Location where job files are stored. Defined in DIGITS_JOBS_DIR

Parameter: logfileFilename

Type: string

Description: File for saving log messages. Defined in DIGITS_LOGFILE_FILENAME

Parameter: logfileLevel

Type: enum

Description: Minimum log message level to be saved (DEBUG/INFO/WARNING/ERROR/CRITICAL). Defined in DIGITS_LOGFILE_LEVEL

Parameter: serverName

Type: string

Description: The name of the server (accessible in the UI under 'Info'). Default is the system host-name. Defined in DIGITS_SERVER_NAME

Parameter: modelStoreUrl

Type: string

Description: A list of URL's, separated by comma. Default is the official NVIDIA store. Defined in DIGITS_MODEL_STORE_URL

Parameter: urlPrefix

Type: string

Description: A path to prepend before every URL. Sets the home-page to be at 'http://localhost/custom-prefix' instead of 'http://localhost/'. Defined in DIGITS_URL_PREFIX

Parameter: caffeRoot

Type: string

Description: Path to your local Caffe build. Should contain build/tools/caffe and python/caffe/. Defined in CAFFE_ROOT

Parameter: torchRoot

Type: string

Description: Path to your local Torch build. Should contain install/bin/th. Defined in TORCH_ROOT

Parameter: tensorflowRoot

Type: string

Description: Path to your local TensorFlow build. Defined in TENSORFLOW_ROOT

5.2.80 DirectorRole : Role

parent : Role

Parameter: syncFSParts

Type: enum

Description: Sync FSParts mode

Parameter: fsparts

Type: list of references to FSPart

Description: FSParts

Parameter: disableAutomaticExports

Type: boolean

Description: Disable creation of automatic filesystem exports

Parameter: rsyslog

Type: enum

Description: Rsyslog target

5.2.81 `DiskAssertion : Entity`

parent : Entity

Parameter: name

Type: string

Description: Name.

Parameter: script

Type: string

Description: Assertion script.

Parameter: args

Type: string

Description: Script arguments.

5.2.82 `DiskDevice : Entity`

parent : Entity

Parameter: requiredSize

Type: string

Description: Required Size

Parameter: vendor

Type: string

Description: Required Vendor

Parameter: blockDevs

Type: list of strings

Description: Block Devices

Parameter: partitions

Type: list of `DiskPartition`

Description: Partitions

Parameter: assertions

Type: list of `DiskAssertion`

Description: Assertions

5.2.83 `DiskInfo : Entity`**parent** : Entity**Parameter:** name**Type:** string**Description:** none**Parameter:** model**Type:** string**Description:** none**Parameter:** vendor**Type:** string**Description:** none**Parameter:** size**Type:** unsigned integer**Description:** none**Parameter:** rev**Type:** string**Description:** none**Parameter:** ioScheduler**Type:** string**Description:** none**5.2.84** `DiskPartition : Entity`**parent** : Entity**Parameter:** name**Type:** string**Description:** Name**Parameter:** size**Type:** string**Description:** Size**Parameter:** type**Type:** string**Description:** Type**Parameter:** mountpoint**Type:** string**Description:** Mount point**Parameter:** mountoptions**Type:** string

Description: Mount options

Parameter: filesystem

Type: string

Description: Filesystem

5.2.85 DiskRaid:Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: size

Type: string

Description: Size

Parameter: level

Type: integer

Description: Level

Parameter: partitions

Type: list of strings

Description: Partitions

Parameter: mountpoint

Type: string

Description: Mount point

Parameter: mountoptions

Type: string

Description: Mount options

Parameter: filesystem

Type: string

Description: Filesystem

Parameter: swap

Type: boolean

Description: Use for swap

5.2.86 DiskSetup:Entity

parent : Entity

Parameter: devices

Type: list of DiskDevice

Description: List of block devices.

Parameter: raids

Type: list of DiskRaid

Description: List of raid devices.

Parameter: volumeGroups

Type: list of DiskVolumeGroup

Description: List of volume groups.

Parameter: diskless

Type: boolean

Description: If set the node will have its root file-system in RAM.

Parameter: maxMemSize

Type: string

Description: Maximum amount (in bytes) of RAM the root file-system can use.

5.2.87 DiskVolumeGroup : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: extentSize

Type: string

Description: Size

Parameter: physicalVolumes

Type: list of strings

Description: Physical volumes

Parameter: logicalVolumes

Type: list of DiskVolume

Description: Logical volumes

5.2.88 DiskVolume : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: size

Type: string

Description: Size

Parameter: mountpoint

Type: string

Description: Mount point

Parameter: mountoptions

Type: string

Description: Mount options

Parameter: filesystem

Type: string

Description: Filesystem

5.2.89 DnsRole : Role

parent : Role

Parameter: nodegroups

Type: list of references to NodeGroup

Description: List of node groups which can boot from this node

Parameter: categories

Type: list of references to Category

Description: List of categories which can boot from this node

Parameter: racks

Type: list of references to Rack

Description: List of racks which can boot from this node

5.2.90 DockerHostRole : Role

parent : Role

Parameter: spool

Type: string

Description: Root of the Docker runtime

Parameter: tmpDir

Type: string

Description: Location used for temporary files (token \$spool is replaced to path to docker runtime root directory)

Parameter: enableSelinux

Type: boolean

Description: Enable selinux support in docker daemon

Parameter: defaultUlimits

Type: list of strings

Description: Set the default ulimit options to use for all containers

Parameter: debug

Type: boolean

Description: Enable debug mode

Parameter: logLevel

Type: string

Description: Set the logging level

Parameter: bridgeIp

Type: string

Description: Network bridge IP

Parameter: bridge

Type: string

Description: Attach containers to a network bridge

Parameter: mtu

Type: unsigned integer

Description: Set the containers network MTU (in bytes)

Parameter: apiSockets

Type: list of strings

Description: Daemon socket(s) to connect to (-H docker daemon option)

Parameter: iptables

Type: boolean

Description: Enable addition of iptables rules

Parameter: userNamespaceRemap

Type: string

Description: User/Group setting for user namespaces

Parameter: insecureRegistries

Type: list of strings

Description: If you have a registry secured with https but do not have proper certs distributed, you can tell docker to not look for full authorization by adding the registry to this list. Accepted Format : CIDR or hostname:port

Parameter: enableTls

Type: boolean

Description: Use TLS

Parameter: verifyTls

Type: boolean

Description: Use TLS and verify the remote

Parameter: tlsCa

Type: string

Description: Trust certs signed only by this CA

Parameter: tlsCertificate

Type: string

Description: Path to TLS certificate file

Parameter: tlsKey

Type: string

Description: Path to TLS key file

Parameter: certificatesPath

Type: string

Description: Path to docker certificates

Parameter: storageBackends

Type: list of DockerStorageBackend

Description: Docker storage backends

Parameter: containerdSocket

Type: string

Description: Path to containerd socket

Parameter: runtime

Type: string

Description: Docker runtime

Parameter: options

Type: list of strings

Description: Additional parameters for docker daemon

5.2.91 DockerStorageAufsBackend : DockerStorageBackend

parent : DockerStorageBackend

Parameter: options

Type: list of strings

Description: Extra options used for the AUFS storage backend

5.2.92 DockerStorageBackend : Entity

parent : Entity

Parameter: name

Type: string

Description: Docker storage backend name

5.2.93 DockerStorageDeviceMapperBackend : DockerStorageBackend

parent : DockerStorageBackend

Parameter: loopDataSize

Type: string

Description: Size to use when creating the loopback file for the 'data' device which is used for the thin pool (driver option: dm.loopdatasize)

Parameter: loopMetadataSize

Type: string

Description: Size to use when creating the loopback file for the 'metadadata' device which is used for the thin pool (driver option: dm.loopmetadatasize)

Parameter: baseSize

Type: string

Description: Size to use when creating the base device, which limits the size of images and container (driver option: dm.basesize)

Parameter: poolDevice

Type: string

Description: Custom block storage device to use for the thin pool (driver option: dm.thinpooldev)

Parameter: filesystem

Type: string

Description: Filesystem type to use for the base device (driver option: dm.fs)

Parameter: blockSize

Type: string

Description: Custom blocksize to use for the thin pool (driver option: dm.blocksize)

Parameter: blkDiscard

Type: boolean

Description: Enables or disables the use of blkdiscard when removing devicemapper devices (driver option: dm.blkdiscard)

Parameter: mkfsArguments

Type: list of strings

Description: Extra mkfs arguments to be used when creating the base device (drive option: dm.mkfsarg)

Parameter: mountOptions

Type: list of strings

Description: Extra mount options used when mounting the thin devices (drive option: dm.mountopt)

5.2.94 DockerStorageOverlay2Backend : DockerStorageBackend

parent : DockerStorageBackend

Parameter: overrideKernelCheck

Type: boolean

Description: Override the kernel check to allow overlay2

Parameter: size

Type: string

Description: Default max size of the container (empty = unlimited)

Parameter: options

Type: list of strings

Description: Extra options used for the AUFS storage backend

5.2.95 DrainAction : Entity

parent : Entity

Parameter: node

Type: reference to Node

Description: Node

Parameter: actions

Type: list of references to MonitoringAction

Description: Actions to execute after the node has been drained

5.2.96 DrainResult : Entity

parent : Entity

Parameter: scheduler

Type: string

Description: Scheduler

Parameter: success

Type: boolean

Description: Success

Parameter: node

Type: list of unsigned numbers

Description: Node

Parameter: queue

Type: list of unsigned numbers

Description: Queue

Parameter: result

Type: list of unsigned numbers

Description: Result

5.2.97 EC2AMI : CloudImage

parent : CloudImage

Parameter: regionAMI

Type: list of EC2RegionAMI

Description: The AMI.

Parameter: paid

Type: boolean

Description: Whether or not this AMI, when used, is charged for extra by cloud provider

5.2.98 EC2AvailabilityZone : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

5.2.99 EC2EBSStorage : EC2Storage

parent : EC2Storage

Parameter: volumeId

Type: string

Description: Volume ID assigned by EC2 EC2

Parameter: size

Type: unsigned integer

Description: Size

Parameter: persistent

Type: boolean

Description: Persistent storage will not be removed when instance is removed

Parameter: availabilityZone

Type: string

Description: Availability zone set by EC2

Parameter: creationTime

Type: timestamp

Description: Time of creation in EC2

Parameter: status

Type: string

Description: Status of EBS volume in EC2

Parameter: volumeType

Type: enum

Description: Specifies what type of EBS volume to use

Parameter: iops

Type: unsigned integer

Description: Specifies the IOPS rate for the provisioned IOPS volume type

Parameter: encrypted

Type: boolean

Description: none

Parameter: snapshotId

Type: string

Description: ID of the snapshot which should be used to instantiate the new disk. This field can be used to speed up node provisioning by first provisioning a cloud compute node, creating a snapshot of its volumes, and then setting that snapshot ID in this field for remaining cloud compute nodes.

5.2.100 EC2EphemeralStorage : EC2Storage

parent : EC2Storage

Parameter: volumeId

Type: string

Description: Ephemral ID

Parameter: size

Type: unsigned integer

Description: Size

5.2.101 EC2Provider : CloudProvider

parent : CloudProvider

Parameter: username

Type: string

Description: AWS region to be used for listing available regions

Parameter: accountId

Type: string

Description: AWS Account ID

Parameter: accessKeyId

Type: string

Description: AWS access key ID

Parameter: accessKeySecret

Type: string

Description: AWS secret access key

Parameter: VPCs

Type: list of EC2VPC

Description: List of VPCs

Parameter: defaultRegion

Type: reference to EC2Region or None

Description: Default region to start instances in

Parameter: defaultAMI

Type: reference to EC2AMI or None

Description: Default AMI to start instances with

Parameter: defaultType

Type: reference to EC2Type or None

Description: Default type for instances

Parameter: defaultDirectorType

Type: reference to EC2Type or None

Description: Default type for cloud director instances

Parameter: addJobBasedTag

Type: boolean

Description: Enable automatic cost monitoring of cloud jobs through remote labeling

Parameter: JobIdTagName

Type: string

Description: *none*

Parameter: JobAccountTagName

Type: string

Description: *none*

Parameter: JobUserTagName

Type: string

Description: *none*

Parameter: JobNameTagName

Type: string

Description: *none*

Parameter: billingAccessKeyId

Type: string

Description: AWS billing access key ID

Parameter: billingAccessKeySecret

Type: string

Description: AWS billing secret access key

Parameter: useMarketplaceAMIs

Type: enum

Description: Preference towards using marketplace AMIs

5.2.102 EC2RegionAMI : Entity

parent : Entity

Parameter: region

Type: reference to EC2Region

Description: The cloud region containing this AMI

Parameter: amiID

Type: string

Description: The AMI ID

5.2.103 EC2Region : CloudRegion

parent : CloudRegion

Parameter: url

Type: string

Description: url

Parameter: availabilityZones

Type: list of EC2AvailabilityZone

Description: Availability zones

5.2.104 EC2Settings : CloudSettings

parent : CloudSettings

Parameter: instanceId

Type: string

Description: Instance-ID provided by EC2

Parameter: spotId

Type: string

Description: Spot-request-ID provided by EC2

Parameter: sshConnectString

Type: string

Description: SSH connection string provided by EC2

Parameter: type

Type: reference to EC2Type or None

Description: Type for instance

Parameter: region

Type: reference to EC2Region

Description: Region for instance

Parameter: ami

Type: reference to EC2AMI or None

Description: AMI used to create instance

Parameter: allocatePublicIP

Type: boolean

Description: Whether to allocate a public IP for this instance. Always true for cloud directors.

Parameter: sourceDestinationCheck

Type: boolean

Description: Whether to perform source/destination checks on the instance traffic.

Parameter: kernel

Type: string

Description: Kernel used to create instance

Parameter: initrd

Type: string

Description: Initial ramdisk used to create instance

Parameter: options

Type: string

Description: User defined options passed to EC2 on instance creation

Parameter: storage

Type: list of EC2Storage

Description: Assign EC2 storage

Parameter: cpuOptions

Type: string

Description: CPU Options in AWS shorthand syntax (e.g: CoreCount=8,ThreadsPerCore=1)

Parameter: spotPrice

Type: float

Description: Maximum price to start instance with

Parameter: spotPersistent

Type: boolean

Description: Persistent spot instances are requested again after they are automatically stopped, because price became to high

Parameter: useNonDefaultVirtualizationType

Type: boolean

Description: *none*

Parameter: placementGroup

Type: string

Description: Start instance in the specified placement group

5.2.105 EC2Storage : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: drive

Type: string

Description: Mount device as /dev/?

Parameter: tags

Type: list of strings

Description: List of tags that will be assigned to storage

5.2.106 EC2Type : CloudType

parent : CloudType

Parameter: virtualizationType

Type: string

Description: Virtualization type.

Parameter: ondemandPrices

Type: list of strings

Description: List of on-demand prices for VMs of this type.

5.2.107 EC2VPC : Entity

parent : Entity

Parameter: name

Type: string

Description: User-defined name of the private cloud

Parameter: vpcID

Type: string

Description: AWS VPC identifier

Parameter: mainRouteTable

Type: string

Description: Main route table AWS ID

Parameter: defaultACL

Type: string

Description: Default network access controll list ID

Parameter: internetGatewayID

Type: string

Description: The AWS ID of the internet gateway assigned to this VPC

Parameter: region

Type: reference to EC2Region

Description: AWS region of the VPC

Parameter: subnets

Type: list of references to Network

Description: Subnets (networks) associated with the VPC

Parameter: baseAddress

Type: IP

Description: Base IP address of the VPC

Parameter: netmaskBits

Type: integer

Description: Number of netmask Bits

Parameter: securityGroupNode

Type: string

Description: Security group ID of the cloud nodes

Parameter: securityGroupDirector

Type: string

Description: Security group ID of the cloud director

Parameter: routeTableIdPublic

Type: string

Description: Routing table ID for the public subnet

Parameter: routeTableIdPrivate

Type: string

Description: Routing table ID for private subnets

Parameter: `manageVPCInAWS`

Type: boolean

Description: Whether to create/remove VPC in AWS as they are created/removed in Bright.

Parameter: `manageSecurityGroupsInAWS`

Type: boolean

Description: Whether to ensure security groups are created in AWS.

Parameter: `manageSubnetsInAWS`

Type: boolean

Description: Whether to create/remove VPC subnets in AWS as they are created/removed in Bright.

Parameter: `manageRouteTableSetupInAWS`

Type: boolean

Description: Whether to create routing table entries in the VPC.

Parameter: `useInternalIPForDirectorIP`

Type: boolean

Description: If specified, CMDaemon will use cloud director's internal IP, instead of a public/external IP. Useful when you have existing IP connectivity to your VPC.

Parameter: `enforceDirectorIP`

Type: IP

Description: If specified, CMDaemon will assume this is the cloud director's IP address.

Parameter: `customDefaultGWPrivateSubnet`

Type: string

Description: Use this to override the default gateway which will be set for the routing tables of the VPC's private subnet.

Parameter: `customDefaultGWPublicSubnet`

Type: string

Description: Use this to override the default gateway which will be set for the routing tables of the VPC's public subnet.

Parameter: `defaultGWPrivateSubnetType`

Type: string

Description: Default gateway private subnet type.

Parameter: `vpceExtraField2`

Type: list of strings

Description: A list of various advanced options.

5.2.108 EdgeDirectorRole : DirectorRole

parent : DirectorRole

Parameter: nodePowerOperations

Type: boolean

Description: Execute all power operations of nodes in the edge site on the director

Parameter: directorPowerOperations

Type: boolean

Description: Execute all power operation of the director on the director, note that this means it cannot be powered on

Parameter: nodeSelectionBootRole

Type: boolean

Description: Use the edge site as a node selection mechanism for the boot role

Parameter: nodeSelectionDnsRole

Type: boolean

Description: Use the edge site as a node selection mechanism for the DNS role

Parameter: nodeSelectionProvisioningRole

Type: boolean

Description: Use the edge site as a node selection mechanism for the provisioning role

Parameter: openTCPPortsOnHeadNode

Type: list of unsigned numbers

Description: The list of TCP ports that will be opened in shorewall on the head node

Parameter: openUDPPortsOnHeadNode

Type: list of unsigned numbers

Description: The list of UDP ports that will be opened in shorewall on the head node

Parameter: externallyVisibleIp

Type: IP

Description: IP that will be seen by other nodes when the director connects

Parameter: externallyVisibleHeadNodeIp

Type: IP

Description: Head node IP that will be use by this director

5.2.109 EdgeSite : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: contact

Type: list of strings

Description: Names of contacts

Parameter: adminEmail

Type: list of strings

Description: Administrator's email

Parameter: address

Type: string

Description: Address

Parameter: city

Type: string

Description: City

Parameter: country

Type: string

Description: Country

Parameter: notes

Type: string

Description: Notes

Parameter: nodes

Type: list of references to ComputeNode

Description: List of nodes in this site

Parameter: switches

Type: list of references to Switch

Description: List of switches in this site

Parameter: secret

Type: string

Description: Edge site secret

Parameter: createISO

Type: enum

Description: Edge site site ISO/script for USB

Parameter: createIMG

Type: enum

Description: Edge site site IMG/script for MMC

5.2.110 ElasticSearchRole : Role

parent : Role

Parameter: clusterName

Type: string

Description: Elastic Search cluster name

Parameter: includeInHAProxy

Type: boolean

Description: Include this endpoint in the config of frontend HAProxy nodes

Parameter: frontendHAProxyNames

Type: list of strings

Description: If set to a name of HAProxy, automatically configure the nodes having this role only behind that particular HAProxy.

Parameter: network

Type: reference to Network

Description: Network on which elastic search listens

Parameter: isBackupEndpoint

Type: boolean

Description: Configure this API endpoint as a 'backup' backend in HAProxy (only used if primary backends are down).

Parameter: apiPort

Type: unsigned integer

Description: API port to bind

5.2.111 EntityManagersMD5 : Entity

parent : Entity

Parameter: name

Type: list of strings

Description: Name

Parameter: md5

Type: list of strings

Description: MD5

5.2.112 Entity

Parameter: uniqueKey

Type: 64 bit unsigned

Description: Unique identifier

Parameter: baseType

Type: string

Description: Basis instance type

Parameter: childType

Type: string

Description: Specialized instance type

Parameter: revision

Type: string

Description: A free text revision field

5.2.113 EtcdCluster : Entity

parent : Entity

Parameter: name

Type: string

Description: Name of the Etcd cluster

Parameter: heartBeatInterval

Type: unsigned integer

Description: Time (in milliseconds) of a heartbeat interval

Parameter: electionTimeout

Type: unsigned integer

Description: Time (in milliseconds) for an election to timeout

Parameter: notes

Type: string

Description: Notes

Parameter: ca

Type: string

Description: The Certificate Authority (CA) Certificate path for Etcd, used to generate certificates for Etcd.

Parameter: cakey

Type: string

Description: The Certificate Authority (CA) Key path for Etcd, used to generate certificates for Etcd.

Parameter: memberCertificate

Type: string

Description: The Certificate path to use for Etcd cluster members, signed with the Etcd CA.

Parameter: memberCertificateKey

Type: string

Description: The Key path to use for Etcd cluster members, signed with the Etcd CA.

Parameter: clientCertificate

Type: string

Description: The Client Certificate used for Etcdctl for example.

Parameter: clientCertificateKey

Type: string

Description: The Client Certificate Key used for Etcdctl for example.

Parameter: clientCA

Type: string

Description: The Certificate Authority (CA) used for client certificates. When set it is assumed client certificate and key will be generated and signed with this CA by another party. Etcd still expects the path to be correct for the Client Certificate and Key.

Parameter: `clientTypeEtcd`

Type: unsigned integer

Description: client type in the CLIENT_TYPE_ETCD range

Parameter: `moduleFileTemplate`

Type: string

Description: Template for system module file

5.2.114 EtcdHostRole : Role

parent : Role

Parameter: `memberName`

Type: string

Description: Human-readable name for this member (\$hostname will be replaced to the node hostname)

Parameter: `spool`

Type: string

Description: Path to the data directory

Parameter: `listenClientUrls`

Type: list of strings

Description: List of URLs to listen on for client traffic

Parameter: `listenPeerUrls`

Type: list of strings

Description: List of URLs to listen on for peer traffic

Parameter: `advertiseClientUrls`

Type: list of strings

Description: List of this member's client URLs to advertise to the public

Parameter: `advertisePeerUrls`

Type: list of strings

Description: List of this member's peer URLs to advertise to the rest of the cluster

Parameter: `snapshotCount`

Type: unsigned integer

Description: Number of committed transactions to trigger a snapshot to disk

Parameter: `maxSnapshots`

Type: unsigned integer

Description: Maximum number of snapshot files to retain (0 is unlimited)

Parameter: `debug`

Type: boolean

Description: Drop the default log level to DEBUG for all subpackages

Parameter: options

Type: list of strings

Description: Additional parameters for etcd daemon

Parameter: etcdCluster

Type: reference to EtcdCluster

Description: The Etcd cluster instance

Parameter: memberCertificate

Type: string

Description: Etcd member certificate, signed with CA specified in the Etcd Cluster. When set it will overrule the value from the EtcdCluster object.

Parameter: memberCertificateKey

Type: string

Description: Etcd member certificate key, signed with CA specified in the Etcd Cluster. When set it will overrule the value from the EtcdCluster object.

5.2.115 EthernetSwitch : Switch

parent : Switch

Parameter: lowestPort

Type: integer

Description: Lowest port

Parameter: uplinks

Type: list of unsigned numbers

Description: List of ports connected to other switches.

Parameter: disablePortDetection

Type: boolean

Description: Disable port detection for this switch

Parameter: disablePortMapping

Type: boolean

Description: Disable port index mapping

Parameter: vlanCacheTime

Type: unsigned integer

Description: Time to cache VLAN information

5.2.116 FailoverRole : Role

parent : Role

Parameter: syncCmShared

Type: boolean

Description: Passive head node has a local copy of /cm/shared

Parameter: syncMonitoring

Type: boolean

Description: Passive head gets updates of cmdaemon monitoring

5.2.117 FileContent : Entity

parent : Entity

Parameter: filename

Type: string

Description: Filename

Parameter: content

Type: string

Description: Content

Parameter: username

Type: string

Description: Username

Parameter: permissions

Type: integer

Description: Permissions

5.2.118 FPGAInfo : Entity

parent : Entity

Parameter: vendor

Type: string

Description: *none*

Parameter: bdf

Type: string

Description: *none*

Parameter: cardType

Type: string

Description: *none*

Parameter: flashType

Type: string

Description: *none*

Parameter: dsaRunningFPGA

Type: string

Description: *none*

Parameter: dsaPackageInstalled

Type: string

Description: *none*

Parameter: name

Type: string

Description: *none*

Parameter: rev

Type: string

Description: *none*

Parameter: serial

Type: string

Description: *none*

Parameter: configMode

Type: string

Description: *none*

Parameter: fanPresence

Type: string

Description: *none*

Parameter: maxPowerLevel

Type: string

Description: *none*

Parameter: mac0

Type: MAC

Description: *none*

Parameter: mac1

Type: MAC

Description: *none*

Parameter: mac2

Type: MAC

Description: *none*

Parameter: mac3

Type: MAC

Description: *none*

5.2.119 FSExport : Entity

parent : Entity

Parameter: name

Type: string

Description: Normally the same as the path, useful when exporting a path twice

Parameter: `path`

Type: `string`

Description: Path to export

Parameter: `network`

Type: reference to `Network` or `None`

Description: Network the interface is connected to

Parameter: `hosts`

Type: `string`

Description: Specify extra hosts-range allowed access to this export (space separated)

Parameter: `automatic`

Type: `boolean`

Description: The export was created automatically

Parameter: `allowWrite`

Type: `boolean`

Description: Allow writing

Parameter: `async`

Type: `boolean`

Description: Allow the NFS server to violate the NFS protocol and reply to requests before any changes made by that request have been committed to stable storage

Parameter: `rootSquash`

Type: `boolean`

Description: Map requests from uid/gid 0 to the anonymous uid/gid

Parameter: `allSquash`

Type: `boolean`

Description: Map all uids and gids to the anonymous user

Parameter: `anonUid`

Type: `unsigned integer`

Description: Anonymous account user id number

Parameter: `anonGid`

Type: `unsigned integer`

Description: Anonymous account group id number

Parameter: `extraOptions`

Type: `string`

Description: Extra options to be added to this export

Parameter: `fsid`

Type: `unsigned integer`

Description: Identification for exports used in failover setup. Make sure these are identical

Parameter: rdma

Type: boolean

Description: Enable NFS over RDMA

Parameter: disabled

Type: boolean

Description: Disable the export

Parameter: checkTree

Type: boolean

Description: Check tree

5.2.120 FSMount : Entity

parent : Entity

Parameter: device

Type: string

Description: What to mount.

Parameter: mountpoint

Type: string

Description: Where to mount.

Parameter: filesystem

Type: string

Description: The file system type.

Parameter: mountoptions

Type: string

Description: What options to use for mounting.

Parameter: dump

Type: boolean

Description: Dump field in fstab, see man fstab.

Parameter: fsck

Type: enum

Description: Filesystem check field in fstab, see man fstab.

Parameter: rdma

Type: boolean

Description: Enable NFS over RDMA.

5.2.121 FSPartAssociation : Entity

parent : Entity

Parameter: syncPoint

Type: string

Description: Directory the FSPart should be synchronized to on the target.

Parameter: `prefix`

Type: string

Description: Optional prefix to the sync point.

Parameter: `fspart`

Type: reference to FSPart

Description: FSPart this association is associated with.

Parameter: `excludeListSync`

Type: string

Description: Exclude list for sync mode provisioning.

Parameter: `excludeListFull`

Type: string

Description: Exclude list for full mode provisioning.

Parameter: `excludeListUpdate`

Type: string

Description: Exclude list for update mode provisioning.

Parameter: `excludeListGrab`

Type: string

Description: Exclude list for grab mode provisioning.

Parameter: `excludeListGrabNew`

Type: string

Description: Exclude list for grabnew mode provisioning.

Parameter: `onSharedStorage`

Type: boolean

Description: FSPart associations on shared storage can be used as provisioning source, but don't need to be kept up-to-date.

Parameter: `disabled`

Type: boolean

Description: Do not rsync this association

5.2.122 `FSPartBasicAssociation` : `FSPartAssociation`

parent : `FSPartAssociation`

Parameter: `isRoot`

Type: boolean

Description: Indicates if this association is the root file system for the target. A node can only have one association where this is set.

5.2.123 `FSPartInfo` : Entity**parent** : Entity**Parameter:** `refFSPartUniqueKey`**Type:** unsigned integer**Description:** `FSPart`**Parameter:** `refNodeUniqueKey`**Type:** unsigned integer**Description:** `Node`**Parameter:** `archOSInfo`**Type:** `ArchOSInfo` or `None`**Description:** Detected arch/OS**Parameter:** `size`**Type:** unsigned integer**Description:** Total size**Parameter:** `inotifyWatcherSize`**Type:** unsigned integer**Description:** Inotify watcher size**5.2.124** `FSPartProviderAssociation` : `FSPartAssociation`**parent** : `FSPartAssociation`**Parameter:** `onlyWhenActive`**Type:** boolean**Description:** Only use provider association if the node is the active head node**5.2.125** `FSPartRole` : `Role`**parent** : `Role`**Parameter:** `fsparts`**Type:** list of references to `FSPart`**Description:** `FSParts`**Parameter:** `fspartSource`**Type:** boolean**Description:** Server as source for all these `FSParts`**5.2.126** `FSPart` : Entity**parent** : Entity**Parameter:** `path`**Type:** string**Description:** Full source path of the filesystem part**Parameter:** `type`**Type:** enum**Description:** The type of filesystem part

Parameter: `watchDirectories`

Type: list of strings

Description: Watch directories for changes on the active head node, filesystem part will be marked dirty when changed

Parameter: `dirtyAutoSyncDelay`

Type: unsigned integer

Description: Time to wait before automatically syncing after the filesystem part became dirty, set 0 to disable

Parameter: `autoDirtyDelay`

Type: unsigned integer

Description: Time to wait before automatically marking an filesystem part as dirty, set 0 to disable

Parameter: `preSyncScript`

Type: string

Description: Script to be executed before rsync runs

Parameter: `postSyncScript`

Type: string

Description: Script to be executed after rsync runs

Parameter: `abortOnPreSyncScriptFailure`

Type: boolean

Description: Do not rsync if the pre sync script exited with a non zero exit code

Parameter: `runPostOnFailure`

Type: boolean

Description: Run the post rsync script even if the pre sync or sync ended with a non zero exit code

Parameter: `syncScriptTimeout`

Type: unsigned integer

Description: Script timeout

Parameter: `rsyncAcls`

Type: boolean

Description: Rsync with `-acls`

Parameter: `rsyncXattrs`

Type: boolean

Description: Rsync with `-xattrs`

Parameter: `rsyncHardlinks`

Type: boolean

Description: Rsync with `-hard-links`

Parameter: `rsyncSparse`

Type: boolean

Description: Rsync with `--sparse`

Parameter: `rsyncNumericIds`

Type: boolean

Description: Rsync with `--numeric-ids`

Parameter: `rsyncForce`

Type: boolean

Description: Rsync with `--force`

Parameter: `rsyncPrune`

Type: boolean

Description: Rsync with `--prune-empty-dirs`

Parameter: `rsyncDelta`

Type: boolean

Description: Rsync with `--inplace --no-whole-file`

Parameter: `rsyncBlockSize`

Type: unsigned integer

Description: Rsync with `--block-size=<value>` Max 128KB, 0 implies rsync default

Parameter: `rsyncBandwidthLimit`

Type: unsigned integer

Description: Rsync with `--bwlimit=<value>`

Parameter: `rsyncCompress`

Type: enum

Description: Rsync with `--compress`

Parameter: `rsyncCompressLevel`

Type: enum

Description: Rsync compression at a specific level

Parameter: `extraRsyncArguments`

Type: list of strings

Description: Extra rsync arguments

Parameter: `excludeList`

Type: string

Description: Exclude list for provisioner updates

5.2.127 FSxInstance : Entity

parent : Entity

Parameter: `fsxId`

Type: string

Description: AWS assigned unique identifier

Parameter: name

Type: string

Description: Non-unique identifier

Parameter: owner

Type: string

Description: Owner of the FSx instance

Parameter: sharedWith

Type: list of strings

Description: Other cmjob users that can use this instance for jobs.

Parameter: vpcId

Type: string

Description: The VPC in which it exists

Parameter: region

Type: string

Description: The AWS region where the instance was created

Parameter: capacity

Type: unsigned integer

Description: Size in GB. Should be at least 3600

Parameter: status

Type: string

Description: AWS reported status of the instance

Parameter: hostname

Type: string

Description: Hostname of the FSx, is internal to the VPC

Parameter: management

Type: enum

Description: Instance management type

Parameter: creationTime

Type: string

Description: Creation time

5.2.128 GaleraRole : Role

parent : Role

Parameter: clusterName

Type: string

Description: Galera cluster name

Parameter: networks

Type: list of references to Network

Description: Priority list of networks on which galera plugin should bind (only one will be selected)

Parameter: mysqlPort

Type: unsigned integer

Description: Port to bind

Parameter: maxConnections

Type: unsigned integer

Description: Maximum number of connections per mariadb instance

Parameter: clusterNodes

Type: list of strings

Description: List of other nodes in the galera cluster. If empty, will be detected automatically

Parameter: weight

Type: unsigned integer

Description: Weight of the node in the weighted quorum calculation

Parameter: allowAutoBootstrap

Type: boolean

Description: Allow automatic cluster recovery in some cases

Parameter: adminUsername

Type: string

Description: Administrator username

Parameter: adminPassword

Type: string

Description: The main administrative password to the galera cluster

Parameter: healthCheckUsername

Type: string

Description: Health check username

Parameter: healthCheckPassword

Type: string

Description: Health check user password

Parameter: gcommPort

Type: unsigned integer

Description: GCOMM port to bind

Parameter: includeInHAProxy

Type: boolean

Description: Include this endpoint in the config of frontend HAProxy nodes

Parameter: frontendHAProxyNames

Type: list of strings

Description: If set to a name of HAProxy, automatically configure the nodes having this role only behind that particular HAProxy.

Parameter: isBackupEndpoint

Type: boolean

Description: Configure this API endpoint as a 'backup' backend in HAProxy (only used if primary backends are down).

Parameter: TimeoutStartSec

Type: string

Description: Timeout in seconds for service to start

Parameter: TimeoutStopSec

Type: string

Description: Timeout in seconds for service to stop

5.2.129 GenericDevice : Device

parent : Device

Parameter: ip

Type: IP

Description: Ip address

Parameter: network

Type: reference to Network or None

Description: Network to which this switch is connected

Parameter: model

Type: string

Description: Device model name

Parameter: additionalHostnames

Type: list of strings

Description: List of additional hostnames that should resolve to the interfaces IP address

5.2.130 GenericResource : BasicResource

parent : BasicResource

Parameter: activateScript

Type: string

Description: Script to be executed when the resource is given to a node

Parameter: deactivateScript

Type: string

Description: Script to be executed when the resource is taken a way from a node

Parameter: checkScript

Type: string

Description: Script to be executed periodically to verify the resource is still running

Parameter: arguments

Type: list of strings

Description: Arguments to pass to the script

Parameter: scriptTimeout

Type: unsigned integer

Description: Script timeout

5.2.131 GenericRoleConfiguration:Entity

parent: Entity

Parameter: name

Type: string

Description: Name

Parameter: createDirectory

Type: boolean

Description: Create directory if it doesn't exist

Parameter: filename

Type: string

Description: Filename

Parameter: mask

Type: unsigned integer

Description: Filemask

Parameter: userName

Type: string

Description: User ownership applied to the file

Parameter: groupName

Type: string

Description: Group ownership applied to the file

Parameter: disabled

Type: boolean

Description: Disabled

Parameter: serviceActionOnWrite

Type: enum

Description: Action performed on service if the file changed

Parameter: serviceStopOnFailure

Type: boolean

Description: Stop services if the file write failed

5.2.132 GenericRoleEnvironment : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: value

Type: string

Description: Value

Parameter: nodeEnvironment

Type: boolean

Description: Update the node environment variables

5.2.133 GenericRoleGeneratedConfiguration : GenericRoleConfiguration

parent : GenericRoleConfiguration

Parameter: script

Type: string

Description: Script

Parameter: arguments

Type: list of strings

Description: Arguments

Parameter: timeout

Type: unsigned integer

Description: Timeout

Parameter: watch

Type: boolean

Description: Watch script for for changes, and rerun

5.2.134 GenericRoleStaticConfiguration : GenericRoleConfiguration

parent : GenericRoleConfiguration

Parameter: content

Type: string

Description: Content to write into file

5.2.135 GenericRoleSymlinkConfiguration : GenericRoleConfiguration

parent : GenericRoleConfiguration

Parameter: sourceFilename

Type: string

Description: Source filename

Parameter: watch

Type: boolean

Description: Watch source file for for changes, and treat as file change

5.2.136 `GenericRoleTemplatedConfiguration : GenericRoleConfiguration`

parent : `GenericRoleConfiguration`

Parameter: `templateContent`

Type: string

Description: Template to use for writing file

Parameter: `environmentFromKeyValueStore`

Type: boolean

Description: Use key value store for extra replacement rules

5.2.137 `GenericRole : Role`

parent : `Role`

Parameter: `services`

Type: list of strings

Description: *none*

Parameter: `configuration`

Type: list of `GenericRoleConfiguration`

Description: *none*

Parameter: `extraEnvironment`

Type: list of `GenericRoleEnvironment`

Description: *none*

Parameter: `excludeList`

Type: list of strings

Description: Excluded paths in the node image update

5.2.138 `GPUInfo : Entity`

parent : `Entity`

Parameter: `name`

Type: string

Description: *none*

Parameter: `index`

Type: unsigned integer

Description: *none*

Parameter: `pciBusId`

Type: string

Description: *none*

Parameter: `pciDevId`

Type: string

Description: *none*

Parameter: pciSubSysId

Type: string

Description: *none*

Parameter: pciMaxLinkGen

Type: string

Description: *none*

Parameter: pciLinkGen

Type: string

Description: *none*

Parameter: pciMaxLinkWidth

Type: string

Description: *none*

Parameter: pciLinkWidth

Type: string

Description: *none*

Parameter: serial

Type: string

Description: *none*

Parameter: uuid

Type: string

Description: *none*

Parameter: vBios

Type: string

Description: *none*

Parameter: driverModel

Type: string

Description: *none*

Parameter: infoRom

Type: string

Description: *none*

Parameter: powerMode

Type: string

Description: *none*

Parameter: powerLimit

Type: string

Description: *none*

Parameter: displayMode

Type: string

Description: *none*

Parameter: eccMode

Type: string

Description: *none*

Parameter: computeMode

Type: string

Description: *none*

Parameter: operationMode

Type: string

Description: *none*

Parameter: persistenceMode

Type: string

Description: *none*

Parameter: clocksSettings

Type: list of strings

Description: *none*

5.2.139 GPUSettings : Entity

parent : Entity

Parameter: name

Type: string

Description: Range of GPUs for which these settings apply

Parameter: source

Type: unsigned integer

Description: *none*

Parameter: unitOffset

Type: unsigned integer

Description: *none*

5.2.140 GpuStatusEntry : Entity

parent : Entity

Parameter: refNodeUniqueKey

Type: unsigned integer

Description: Node

Parameter: index

Type: unsigned integer

Description: GPU index for this status entry

Parameter: gpu

Type: string

Description: Name of the GPU

Parameter: property

Type: string

Description: Property name

Parameter: value

Type: string

Description: Value of the property

Parameter: supported

Type: list of strings

Description: List of supported values for this property

5.2.141 GPUUnitInfo : Entity

parent : Entity

Parameter: name

Type: string

Description: Name of this unit

Parameter: id

Type: string

Description: Numeric identifier of this unit

Parameter: serial

Type: string

Description: *none*

Parameter: driver

Type: string

Description: *none*

Parameter: nvml

Type: string

Description: *none*

Parameter: pciSpeed

Type: string

Description: *none*

Parameter: firmware

Type: string

Description: *none*

Parameter: gpu

Type: list of GPUInfo

Description: GPU information

5.2.142 GpuUnit : Device

parent : Device

Parameter: ip

Type: IP

Description: Ip address

Parameter: network

Type: reference to Network or None

Description: Network to which this switch is connected

Parameter: serial

Type: string

Description: Serial

Parameter: indx

Type: integer

Description: Index of the pci bus

Parameter: bmcSettings

Type: BMCSettings or None

Description: Configure the baseboard management controller settings

Parameter: exclusive

Type: boolean

Description: Run in exclusive mode

Parameter: owners

Type: list of references to Node

Description: List of nodes who have access to this gpu unit

Parameter: gpuSettings

Type: list of GPUSettings

Description: Configure the GPUs

5.2.143 GridEngineJobQueueStat : JobQueueStat

parent : JobQueueStat

Parameter: load

Type: float

Description: Queue queue load

Parameter: used

Type: unsigned integer

Description: Used queue slots

Parameter: available

Type: unsigned integer

Description: Available queue slots

Parameter: total

Type: unsigned integer

Description: Total queue slots

Parameter: resv

Type: unsigned integer

Description: Reserved queue slots

5.2.144 GridEngineJobQueue : JobQueue

parent : JobQueue

Parameter: slots

Type: string

Description: Number of slots

Parameter: tmpdir

Type: string

Description: Temporary directory for queue

Parameter: prolog

Type: string

Description: Path to prolog script (e.g. root@/cm/local/apps/cmd/scripts/prolog)

Parameter: epilog

Type: string

Description: Path to epilog script

Parameter: starterMethod

Type: string

Description: Script to be executed instead of shell to run the job

Parameter: suspendMethod

Type: string

Description: Grid Engine Suspend method

Parameter: resumeMethod

Type: string

Description: Grid Engine Resume method

Parameter: terminateMethod

Type: string

Description: Grid Engine Terminate method

Parameter: minWalltime

Type: string

Description: Minimum runtime for jobs in queue

Parameter: maxWalltime

Type: string

Description: Maximum runtime for jobs in queue

5.2.145 GridEngineJob : Job

parent : Job

5.2.146 GridEngineParallelEnvironment : Entity

parent : Entity

Parameter: name

Type: string

Description: The name of the parallel environment (to be used in the qsub -pe switch)

Parameter: slots

Type: unsigned integer

Description: The number of parallel processes being allowed to run in total under the PE concurrently

Parameter: userLists

Type: list of strings

Description: A list of user access list names

Parameter: xUserLists

Type: list of strings

Description: An exclude list of user access list names

Parameter: startProcedureArguments

Type: string

Description: The invocation command line of a start-up procedure

Parameter: stopProcedureArguments

Type: string

Description: The invocation command line of a shutdown procedure

Parameter: allocationRule

Type: string

Description: The allocation rule helps the scheduler to decide how to distribute parallel processes

Parameter: controlSlaves

Type: boolean

Description: Indicates if GE is the creator of the slave tasks via sge_execd and sge_shepherd

Parameter: jobIsFirstTask

Type: boolean

Description: A value of true indicates that the GE job script already contains one of the tasks

Parameter: urgencySlots

Type: string

Description: Specifies the method to be used by GE to assess the number of slots such jobs might finally get

Parameter: accountingSummary

Type: boolean

Description: Indicates if only a single accounting record (job summary) is written to the accounting file

Parameter: extraParameters

Type: list of strings

Description: Additional parameters that will be added to PE configuration

Parameter: perPeTaskProlog

Type: string

Description: Prolog script that is started for each slave task

Parameter: perPeTaskEpilog

Type: string

Description: Epilog script that is started for each slave task

5.2.147 Group:Entity

parent: Entity

Parameter: ID

Type: string

Description: Group ID

Parameter: name

Type: string

Description: Group name

Parameter: members

Type: list of strings

Description: Users belonging to this group

5.2.148 GuiCephOsdPoolInfo:Entity

parent: Entity

Parameter: refCephOSDPoolUniqueKey

Type: unsigned integer

Description: CephOSDPool

Parameter: name

Type: string

Description: Name

Parameter: sizeBytes

Type: unsigned integer

Description: size_bytes

Parameter: numObjects

Type: unsigned integer

Description: num_objects

Parameter: numObjectClones

Type: unsigned integer

Description: num_object_clones

Parameter: numObjectCopies

Type: unsigned integer

Description: num_object_copies

Parameter: numObjectsMissingOnPrimary

Type: unsigned integer

Description: num_objects_missing_on_primary

Parameter: numObjectsDegraded

Type: unsigned integer

Description: num_objects_degraded

Parameter: numObjectsUnfound

Type: unsigned integer

Description: num_objects_unfound

Parameter: readOps

Type: unsigned integer

Description: Number of reads

Parameter: readBytes

Type: unsigned integer

Description: Total read

Parameter: writeOps

Type: unsigned integer

Description: Number of writes

Parameter: writeBytes

Type: unsigned integer

Description: Total write

5.2.149 [GuiCephOverview](#) : Entity

parent : Entity

Parameter: refCephUniqueKey

Type: unsigned integer

Description: Ceph

Parameter: status

Type: string

Description: Status

Parameter: numPgs

Type: unsigned integer

Description: Number of placement groups

Parameter: numMons

Type: unsigned integer

Description: Number of monitors

Parameter: numOsds

Type: unsigned integer

Description: Total

Parameter: numUpOsds

Type: unsigned integer

Description: Up

Parameter: numInOsds

Type: unsigned integer

Description: In

Parameter: pgsBytesTotal

Type: unsigned integer

Description: PGS Bytes Total

Parameter: pgsBytesUsed

Type: unsigned integer

Description: PGS Bytes Used

Parameter: pgsBytesAvail

Type: unsigned integer

Description: PGS Bytes Avail

Parameter: pgsDataBytes

Type: unsigned integer

Description: Amount of actual data in placement groups

Parameter: pgsReadBytesSec

Type: unsigned integer

Description: Bytes read per second for placement groups

Parameter: pgsWriteBytesSec

Type: unsigned integer

Description: Bytes written per second for placement groups

Parameter: pgs

Type: list of GuiCephPgsInfo

Description: PGS

Parameter: osdpools

Type: list of GuiCephOsdPoolInfo

Description: Ceph OSD Pool Information

5.2.150 GuiCephPgsInfo : Entity

parent : Entity

Parameter: stateName

Type: string

Description: State name

Parameter: version

Type: string

Description: Version

Parameter: numPgs

Type: unsigned integer

Description: Num Pgs

Parameter: dataBytes

Type: unsigned integer

Description: Data Bytes

Parameter: usedBytes

Type: unsigned integer

Description: Used Bytes

Parameter: availBytes

Type: unsigned integer

Description: Avail Bytes

Parameter: totalBytes

Type: unsigned integer

Description: Total Bytes

5.2.151 GuiClusterOverview : Entity

parent : Entity

Parameter: refPartitionUniqueKey

Type: unsigned integer

Description: Partition

Parameter: uptime

Type: unsigned integer

Description: Uptime of the active head node

Parameter: nodesUp

Type: unsigned integer

Description: Number of nodes that are listed as up

Parameter: nodesDown

Type: unsigned integer

Description: Number of nodes that are listed as down

Parameter: nodesClosed

Type: unsigned integer

Description: Number of nodes that are listed as closed

Parameter: nodesTotal

Type: unsigned integer

Description: Number of nodes

Parameter: devicesUp

Type: unsigned integer

Description: Number of non-node devices that are listed as up

Parameter: devicesDown

Type: unsigned integer

Description: Number of non-node devices that are listed as down

Parameter: devicesClosed

Type: unsigned integer

Description: Number of non-node devices that are listed as closed

Parameter: devicesTotal

Type: unsigned integer

Description: Number of non-node devices

Parameter: gpuUnitsUp

Type: unsigned integer

Description: Number of GPU units that are listed as up

Parameter: gpuUnitsDown

Type: unsigned integer

Description: Number of GPU units that are listed as down

Parameter: gpuUnitsClosed

Type: unsigned integer

Description: Number of GPU units that are listed as closed

Parameter: gpuUnitsTotal
Type: unsigned integer
Description: Number of GPU units

Parameter: coresUp
Type: unsigned integer
Description: Sum of all cores for nodes which are up

Parameter: coresTotal
Type: unsigned integer
Description: Sum of all cores for nodes which are up at one time

Parameter: gpusUp
Type: unsigned integer
Description: Sum of all GPUs for nodes which are up

Parameter: gpusTotal
Type: unsigned integer
Description: Sum of all GPUs for nodes which are up at one time

Parameter: disks
Type: list of GuiDiskUsage
Description: Number of disks

Parameter: workload
Type: list of GuiWorkload
Description: Workload information

Parameter: usersLoggedIn
Type: unsigned integer
Description: Number of logged in users on the active head node

Parameter: usersLoggedOut
Type: unsigned integer
Description: Number of logged out users on the active head node

Parameter: usersTotal
Type: unsigned integer
Description: Number of users known to the active head node

Parameter: memoryUsed
Type: unsigned integer
Description: Sum of used memory over all nodes

Parameter: memoryUnused
Type: unsigned integer

Description: Sum of unused memory over all nodes

Parameter: memoryTotal

Type: unsigned integer

Description: Sum of total memory over all nodes

Parameter: swapUsed

Type: unsigned integer

Description: Sum of used swap memory over all nodes

Parameter: swapUnused

Type: unsigned integer

Description: Sum of unused swap memory over all nodes

Parameter: swapTotal

Type: unsigned integer

Description: Sum of total swap over all nodes

Parameter: usageUser

Type: float

Description: Average user cpu usage over all nodes

Parameter: usageSystem

Type: float

Description: Average system cpu usage over all nodes

Parameter: usageIdle

Type: float

Description: Average idle cpu usage over all nodes

Parameter: usageOther

Type: float

Description: Percentage of cpu time spend on other operations

Parameter: phaseLoad

Type: float

Description: Phase load accross all APCs

Parameter: occupationRate

Type: float

Description: Formula: $\text{Average}\{\text{allnodes}\} (\min(\text{load}, \text{cores}) / \text{cores})$

Parameter: freeRate

Type: float

Description: Formula: $1 - \text{Average}\{\text{allnodes}\} (\min(\text{load}, \text{cores}) / \text{cores})$

5.2.152 `GuiCompleteOpenStackOverview : Entity`**parent :** Entity**Parameter:** `displayEntityOverview`**Type:** boolean**Description:** Whether to display the overview of OpenStack objects.**Parameter:** `allVM`**Type:** integer**Description:** All VMs**Parameter:** `allUpVM`**Type:** integer**Description:** All VMs up.**Parameter:** `allErrorVM`**Type:** integer**Description:** Number of VMs in the ERROR state.**Parameter:** `allTenants`**Type:** integer**Description:** The number of all projects.**Parameter:** `allNetworks`**Type:** integer**Description:** The number of all networks.**Parameter:** `allSubnets`**Type:** integer**Description:** The number of all subnets.**Parameter:** `allRouters`**Type:** integer**Description:** The number of all routers.**Parameter:** `allUsers`**Type:** integer**Description:** The number of all users.**Parameter:** `displayNodeOverview`**Type:** boolean**Description:** Whether to display the information about nodes.**Parameter:** `numUpComputeHosts`**Type:** integer**Description:** The number of 'up' compute nodes.**Parameter:** `numDownComputeHosts`

Type: integer

Description: The number of 'down' compute nodes.

Parameter: numUpNetworkNodes

Type: integer

Description: The number of 'up' network nodes.

Parameter: numDownNetworkNodes

Type: integer

Description: The number of 'down' network nodes.

Parameter: numCephOSDs

Type: integer

Description: The number of Ceph OSDs.

Parameter: cloudStatus

Type: integer

Description: *none*

Parameter: cloudStatusText

Type: string

Description: *none*

Parameter: dashboardURLs

Type: list of strings

Description: *none*

Parameter: keystonePublicAuthEndpointURL

Type: string

Description: *none*

Parameter: keystoneInternalAuthEndpointURL

Type: string

Description: *none*

Parameter: defaultProjectName

Type: string

Description: *none*

Parameter: projects

Type: list of GuiOpenStackProjectOverview

Description: *none*

5.2.153 GuiDiskUsage : Entity

parent : Entity

Parameter: refDeviceUniqueKey

Type: unsigned integer

Description: Device

Parameter: mountpoint

Type: string

Description: Mountpoint

Parameter: used

Type: unsigned integer

Description: Bytes in use on this device

Parameter: free

Type: unsigned integer

Description: Bytes free on this device

5.2.154 GuiGPU:Entity

parent : Entity

Parameter: refDeviceUniqueKey

Type: unsigned integer

Description: Device

Parameter: name

Type: string

Description: Name

Parameter: memoryUsed

Type: unsigned integer

Description: Memory used

Parameter: memoryFree

Type: unsigned integer

Description: Memory free

Parameter: utilization

Type: float

Description: GPU Utilization

Parameter: powerUsage

Type: float

Description: Power usage

Parameter: temperature

Type: float

Description: Temperature

Parameter: smClock

Type: float

Description: Streaming multiprocessor clock speed

Parameter: memoryClock
Type: float
Description: Memory clock speed

5.2.155 GuiJob:Entity

parent : Entity
Parameter: refWlmClusterUniqueKey
Type: unsigned integer
Description: WlmCluster

Parameter: refJobQueueUniqueKey
Type: unsigned integer
Description: Queue

Parameter: jobID
Type: string
Description: Job ID

Parameter: name
Type: string
Description: Name

Parameter: user
Type: string
Description: User

Parameter: runtime
Type: unsigned integer
Description: Runtime

5.2.156 GuiKubeClusterOverview:Entity

parent : Entity
Parameter: refKubeClusterUniqueKey
Type: unsigned integer
Description: KubeCluster

Parameter: name
Type: string
Description: Cluster Name

Parameter: version
Type: string
Description: Kubernetes Version

Parameter: notes
Type: string
Description: Notes

Parameter: numNodes

Type: unsigned integer

Description: Number of nodes

Parameter: numNamespaces

Type: unsigned integer

Description: Number of namespaces

Parameter: numServices

Type: unsigned integer

Description: Number of services

Parameter: numRcs

Type: unsigned integer

Description: Number of replication controllers

Parameter: numPvs

Type: unsigned integer

Description: Number of persistent volumes

Parameter: numPvcs

Type: unsigned integer

Description: Number of persistent volumes claims

Parameter: jobs

Type: list of JobInfo

Description: Jobs

Parameter: pods

Type: list of KubePodInfo

Description: Pods

5.2.157 GuiNetworkInterface : Entity

parent : Entity

Parameter: name

Type: string

Description: Interface name

Parameter: rx

Type: unsigned integer

Description: Number of bytes received since startup

Parameter: tx

Type: unsigned integer

Description: Number of bytes transmitted since startup

5.2.158 `GuiNodeOverview:Entity`**parent** : Entity**Parameter:** `refNodeUniqueKey`**Type:** unsigned integer**Description:** Node**Parameter:** `interfaces`**Type:** list of `GuiNetworkInterface`**Description:** Detailed interface information**Parameter:** `disks`**Type:** list of `GuiDiskUsage`**Description:** Detailed disk information**Parameter:** `jobs`**Type:** list of `GuiJob`**Description:** Detailed job information**Parameter:** `gpus`**Type:** list of `GuiGPU`**Description:** Detailed GPU information**Parameter:** `load1`**Type:** float**Description:** Average system load over the last minute**Parameter:** `load5`**Type:** float**Description:** Average system load over the last five minutes**Parameter:** `load15`**Type:** float**Description:** Average system load over the last fifteen minutes**Parameter:** `uptime`**Type:** unsigned integer**Description:** Uptime**Parameter:** `memoryUsed`**Type:** unsigned integer**Description:** Memory used**Parameter:** `memoryUnused`**Type:** unsigned integer**Description:** Memory unused**Parameter:** `memoryTotal`

Type: unsigned integer

Description: Total memory

Parameter: swapUsed

Type: unsigned integer

Description: Swap memory used

Parameter: swapUnused

Type: unsigned integer

Description: Swap memory unused

Parameter: swapTotal

Type: unsigned integer

Description: Total swap memory

Parameter: usageUser

Type: float

Description: Percentage of cpu time spend on user processes

Parameter: usageSystem

Type: float

Description: Percentage of cpu time spend on system processes

Parameter: usageIdle

Type: float

Description: Percentage of cpu time spend in idle

Parameter: usageOther

Type: float

Description: Percentage of cpu time spend in non user/system/idle

Parameter: usageSoftIrq

Type: float

Description: Percentage of cpu time spend in soft irq

Parameter: usageIrq

Type: float

Description: Percentage of cpu time spend in irq

Parameter: usageNice

Type: float

Description: Percentage of cpu time spend in nice

Parameter: usageSteal

Type: float

Description: Percentage of cpu time spend in steal

Parameter: usageGuest

Type: float

Description: Percentage of cpu time spend in guest

Parameter: usageWait

Type: float

Description: Percentage of cpu time spend in wait

5.2.159 GuiNodeStatus : Entity

parent : Entity

Parameter: refNodeUniqueKey

Type: unsigned integer

Description: Node

Parameter: status

Type: DeviceStatus

Description: Device status

Parameter: load1

Type: float

Description: Average system load over the last minute

Parameter: load5

Type: float

Description: Average system load over the last five minutes

Parameter: load15

Type: float

Description: Average system load over the last fifteen minutes

Parameter: uptime

Type: unsigned integer

Description: Uptime

Parameter: memoryUsed

Type: unsigned integer

Description: Memory used

Parameter: swapUsed

Type: unsigned integer

Description: Swap mempry used

Parameter: usageUser

Type: float

Description: Percentage of cpu time spend on user processes

Parameter: usageSystem

Type: float

Description: Percentage of cpu time spend on system processes

Parameter: usageIdle

Type: float

Description: Percentage of cpu time spend in idle

5.2.160 GuiOpenStackOverview: Entity

parent : Entity

Parameter: success

Type: boolean

Description: *none*

Parameter: vcpuUsed

Type: integer

Description: Total number of vCPU used by the VMs.

Parameter: vcpusTotal

Type: integer

Description: *none*

Parameter: ramUsed

Type: integer

Description: The amount of RAM used by the VMs.

Parameter: ramTotal

Type: integer

Description: *none*

Parameter: storageUsed

Type: integer

Description: Total storage space used by OpenStack volumes.

Parameter: storageTotal

Type: integer

Description: *none*

Parameter: instancesRunning

Type: integer

Description: Total number of VMs in the 'Running' state.

Parameter: instancesDown

Type: integer

Description: Total number of VMs in the 'Down' state.

Parameter: instancesTotal

Type: integer

Description: Total number of VMs (in any state).

Parameter: instancesError

Type: integer

Description: Total number of VMs in the 'Error' state.

Parameter: instancesPaused

Type: integer

Description: Total number VMs in the 'Paused' state.

Parameter: numberOfVolumes

Type: integer

Description: Total number of OpenStack volumes. OpenStack volumes are managed by OpenStack Cinder.

Parameter: numberOfTenants

Type: integer

Description: Total number of OpenStack projects (also known as 'tenants'). Project are managed by OpenStack Keystone.

Parameter: numberOfDisabledTenants

Type: integer

Description: Total number of disabled projects.

Parameter: numberOfSystemTenants

Type: integer

Description: *none*

Parameter: numberOfImages

Type: integer

Description: Total number of OpenStack images. Images are used for creating VMs. OpenStack images are managed by Glance.

Parameter: numberOfPublicImages

Type: integer

Description: The number of OpenStack images which are public, i.e. are visible to all users/projects with access to OpenStack.

Parameter: numberOfFlavors

Type: integer

Description: Total number of OpenStack flavors. Flavors define types of VMs that can be created. Flavors are managed by Nova.

Parameter: numberOfPublicFlavors

Type: integer

Description: The number of flavors visible to all tenants/users.

Parameter: numberOfNetworks

Type: integer

Description: Total number of OpenStack networks. Networks are managed by Neutron.

Parameter: numberOfPublicNetworks

Type: integer

Description: The number of OpenStack networks visible to all tenants/users.

Parameter: numberOfSubnets

Type: integer

Description: Subnets are part of a network. Subnets are managed by Neutron.

Parameter: numberOfRouters

Type: integer

Description: Total number of OpenStack routers. Routers are managed by Neutron and are used to interconnect Networks.

Parameter: numberOfUsers

Type: integer

Description: Total number of users known to Keystone.

Parameter: numberOfDisabledUsers

Type: integer

Description: Disabled users cannot access OpenStack.

Parameter: numberOfFloatingIPs

Type: integer

Description: Total number of floating IPs.

Parameter: numberOfFloatingIPsUsed

Type: integer

Description: The number of floating IPs which are in use by instances.

Parameter: numberOfSystemUsers

Type: integer

Description: *none*

Parameter: numberOfHypervisors

Type: integer

Description: Total number of hypervisors which are both 'Up' and 'Enabled'. This number does not include 'Disabled' hypervisors, or hypervisors which are 'Down'.

Parameter: numberOfAllDefinedHypervisors

Type: integer

Description: Total number of hypervisors known to OpenStack Nova. Might include old, no longer existing, hypervisors. Also includes hypervisors which are 'Down' and/or disabled.

Parameter: numberOfAvailabilityZones

Type: integer

Description: Total number of AZs defined with OpenStack Host Aggregates. Those typically apply only to Nova (the compute part of OpenStack).

Parameter: numberOfHostAggregates

Type: integer

Description: Host Aggregates are an advanced concept. They are managed by Nova, and can be used to group compute hypervisors to either define new availability zones, or aggregate host sharing a common characteristic, e.g. having a GPU, or fast CPUs. Such hosts can later be exposed via flavors which refer to the given host aggregate (e.g. a flavor with GPUs).

Parameter: numberOfRoles

Type: integer

Description: Total number of roles known to OpenStack keystone. Roles, (such as e.g. 'admin' or 'member') define which operation an OpenStack user can perform on OpenStack APIs.

Parameter: status

Type: string

Description: none

Parameter: numberOfSnapshots

Type: integer

Description: Volume snapshots are managed by OpenStack Cinder.

Parameter: numberOfDomains

Type: integer

Description: Total number of domains. Domains are top-level projects, and are managed by OpenStack Keystone.

Parameter: ephemeralStorageUsed

Type: integer

Description: Ephemeral storage is the block storage bound to a VM. Ephemeral storage (unlike volume-based storage), is managed by OpenStack Nova. It can either be local to the hypervisor (low latency), or distributed (high availability).

Parameter: hypFreeDisk

Type: unsigned integer

Description: Free disk space left across all hypervisors.

Parameter: hypFreeRam

Type: unsigned integer

Description: Free memory left across all hypervisors.

Parameter: hypLocalStorage

Type: unsigned integer

Description: Local storage available across all hypervisors.

Parameter: hypLocalStorageUsed

Type: unsigned integer

Description: Local storage used across all hypervisors.

Parameter: hypMemory

Type: unsigned integer

Description: Total amount of memory available across all hypervisors.

Parameter: hypMemoryUsed

Type: unsigned integer

Description: Total amount of memory being used across all hypervisors.

Parameter: hypVcpus

Type: unsigned integer

Description: Total amount of vCPUs across all hypervisors.

Parameter: hypVcpusUsed

Type: unsigned integer

Description: Total amount of vCPUs used across all hypervisors.

Parameter: hypCurrentWorkload

Type: unsigned integer

Description: *none*

Parameter: hypRunningVMs

Type: unsigned integer

Description: If this value is different than total number of running instance, you might have rogue VMs in the system.

Parameter: extra1

Type: unsigned integer

Description: *none*

Parameter: extra2

Type: unsigned integer

Description: *none*

Parameter: extra3

Type: unsigned integer

Description: *none*

Parameter: extra4

Type: unsigned integer

Description: *none*

Parameter: extra5

Type: unsigned integer

Description: Total number of compute nodes (with OpenStack compute roles assigned) which are UP.

Parameter: extra6

Type: unsigned integer

Description: Total number of compute nodes (with OpenStack compute roles assigned).

Parameter: extra7

Type: unsigned integer

Description: none

Parameter: extra8

Type: unsigned integer

Description: none

Parameter: extra9

Type: unsigned integer

Description: Total number of volumes in an ERROR state.

Parameter: extra10

Type: unsigned integer

Description: none

Parameter: extraString1

Type: string

Description: none

Parameter: extraString2

Type: string

Description: none

Parameter: extraString3

Type: string

Description: none

Parameter: extraString4

Type: string

Description: none

Parameter: extraString5

Type: string

Description: none

Parameter: extraString6

Type: string

Description: none

Parameter: extraString7

Type: string

Description: *none*

Parameter: extraString8

Type: string

Description: *none*

Parameter: extraString9

Type: string

Description: *none*

Parameter: extraString10

Type: string

Description: *none*

Parameter: extraStringList

Type: list of strings

Description: *none*

Parameter: extraStringList2

Type: list of strings

Description: *none*

Parameter: extraStringList3

Type: list of strings

Description: *none*

Parameter: extraStringList4

Type: list of strings

Description: *none*

5.2.161 GuiOpenStackProjectOverview : Entity

parent : Entity

Parameter: motd

Type: string

Description: Message of the day.

Parameter: name

Type: string

Description: The name.

Parameter: UUID

Type: string

Description: Unique identifier.

Parameter: roles

Type: list of strings

Description: Roles the user has in the project.

Parameter: numOfAllVMsInProject

Type: integer

Description: The number of all VMs owned by the project.

Parameter: numOfAllUpVMsInProject

Type: integer

Description: The number of VMs which are UP and owned by the project.

Parameter: numOfAllErrorVMsInProject

Type: integer

Description: The number of VMs in ERROR state which are owned by the project.

Parameter: numOfUserVMsInProject

Type: integer

Description: The number of VMs owned by the project and by this user.

Parameter: numOfUserUpVMsInProject

Type: integer

Description: The number of VMs owned by the project and by this user, which are UP.

Parameter: numOfUserErrorVMsInProject

Type: integer

Description: The number of VMs owned by the project and by this user, which are UP.

Parameter: allNetworks

Type: integer

Description: The number of all networks in the project.

Parameter: allSubnets

Type: integer

Description: The number of all subnets in the project.

Parameter: allRouters

Type: integer

Description: The number of all routers in the project.

Parameter: allPorts

Type: integer

Description: The number of all ports in the project.

Parameter: numOfAllUsersInProject

Type: unsigned integer

Description: Number of all users in the project.

Parameter: otherUsersInProject

Type: list of strings

Description: List of other users in the project.

5.2.162 GuiOpenStackTenantOverview:Entity

parent : Entity

Parameter: success

Type: boolean

Description: *none*

Parameter: vcpuUsed

Type: integer

Description: *none*

Parameter: vcpuMax

Type: integer

Description: *none*

Parameter: metaDataItemsUsed

Type: integer

Description: *none*

Parameter: metaDataItemsMax

Type: integer

Description: *none*

Parameter: ramUsed

Type: integer

Description: *none*

Parameter: ramMax

Type: integer

Description: *none*

Parameter: instancesUsed

Type: integer

Description: *none*

Parameter: instancesMax

Type: integer

Description: *none*

Parameter: instancesRunning

Type: integer

Description: *none*

Parameter: floatingIPsUsed

Type: integer

Description: *none*

Parameter: floatingIPsMax

Type: integer

Description: *none*

Parameter: securityGroupsUsed

Type: integer

Description: *none*

Parameter: securityGroupsMax

Type: integer

Description: *none*

Parameter: volumesUsed

Type: integer

Description: *none*

Parameter: volumesMax

Type: integer

Description: *none*

Parameter: snapshotsUsed

Type: integer

Description: *none*

Parameter: snapshotsMax

Type: integer

Description: *none*

Parameter: injectedFilesUsed

Type: integer

Description: *none*

Parameter: injectedFilesMax

Type: integer

Description: *none*

Parameter: securityGroupRulesUsed

Type: integer

Description: *none*

Parameter: securityGroupRulesMax

Type: integer

Description: *none*

Parameter: networksUsed

Type: integer

Description: *none*

Parameter: networksMax

Type: integer

Description: *none*

Parameter: subnetsUsed

Type: integer

Description: *none*

Parameter: subnetsMax

Type: integer

Description: *none*

Parameter: routersUsed

Type: integer

Description: *none*

Parameter: routersMax

Type: integer

Description: *none*

Parameter: portsUsed

Type: integer

Description: *none*

Parameter: portsMax

Type: integer

Description: *none*

Parameter: numberOfImages

Type: integer

Description: *none*

Parameter: bytesUsed

Type: integer

Description: *none*

Parameter: bytesMax

Type: integer

Description: *none*

Parameter: numberOfUsers

Type: integer

Description: *none*

Parameter: numberOfSystemUsers

Type: integer

Description: *none*

Parameter: vcpuHours

Type: float

Description: *none*

Parameter: diskGBHours

Type: float

Description: *none*

Parameter: extra1

Type: integer

Description: *none*

Parameter: extra2

Type: integer

Description: *none*

Parameter: extra3

Type: integer

Description: *none*

Parameter: extra4

Type: integer

Description: *none*

Parameter: extraStringList

Type: list of strings

Description: *none*

5.2.163 GuiPDUBank : Entity

parent : Entity

Parameter: bank

Type: unsigned integer

Description: Bank

Parameter: load

Type: float

Description: Load

5.2.164 GuiPDUOutlet : Entity

parent : Entity

Parameter: outlet

Type: unsigned integer

Description: Outlet

Parameter: status

Type: enum

Description: Status

Parameter: assigned

Type: list of unsigned numbers

Description: Assigned

5.2.165 GuiPDUOverview:Entity

parent : Entity

Parameter: refPowerDistributionUnitUniqueKey

Type: unsigned integer

Description: none

Parameter: model

Type: string

Description: none

Parameter: outlets

Type: list of GuiPDUOutlet

Description: none

Parameter: banks

Type: list of GuiPDUBank

Description: none

5.2.166 GuiSwitchOverview:Entity

parent : Entity

Parameter: refSwitchUniqueKey

Type: unsigned integer

Description: Switch

Parameter: model

Type: string

Description: Model

Parameter: ports

Type: list of GuiSwitchPort

Description: Ports

5.2.167 GuiSwitchPort:Entity

parent : Entity

Parameter: prt

Type: integer

Description: Port

Parameter: name

Type: string

Description: Name

Parameter: status

Type: string

Description: Status

Parameter: uplink

Type: boolean

Description: Uplink

Parameter: assigned

Type: unsigned integer

Description: Unique key of the device assigned to this port

Parameter: detected

Type: string

Description: List of MAC address detected on this port

Parameter: speed

Type: unsigned integer

Description: Speed

5.2.168 `GuiWorkload:Entity`

parent: Entity

Parameter: name

Type: string

Description: Queue name

Parameter: scheduler

Type: string

Description: Scheduler

Parameter: slots

Type: string

Description: Slots

Parameter: nodeKeys

Type: list of unsigned numbers

Description: Node keys

Parameter: nodes

Type: string

Description: Nodes

Parameter: running

Type: unsigned integer

Description: Number of running jobs in this queue

Parameter: `queued`
Type: unsigned integer
Description: Number of pending jobs in this queue

Parameter: `error`
Type: unsigned integer
Description: Number of jobs ended in an error state

Parameter: `completed`
Type: unsigned integer
Description: Number of completed jobs

Parameter: `averageDuration`
Type: unsigned integer
Description: Average duration of jobs

Parameter: `estimatedDelay`
Type: unsigned integer
Description: Estimated delay for a new job to start

5.2.169 `HAProxyEntryBind` : Entity

parent : Entity

Parameter: `listenOn`

Type: enum

Description: Where to listen for connections

Parameter: `name`

Type: string

Description: name of the bind location

Parameter: `ip`

Type: IP

Description: IP to bind to

Parameter: `location`

Type: string

Description: Socket to bind

Parameter: `port`

Type: integer

Description: Not needed if location is a socket

Parameter: `portEnd`

Type: integer

Description: Optional. If specified, proxy will bind to a range of ports

Parameter: `parameters`

Type: string
Description: Parameters.

Parameter: disabled
Type: boolean
Description: If disabled, will not be used in config file

Parameter: network
Type: reference to Network
Description: Network an IP of which the proxy is to bind to. Takes precedence over location

5.2.170 HAProxyEntry : Entity

parent : Entity

Parameter: name

Type: string
Description: Human readable name of the entry

Parameter: bindLocations
Type: list of HAProxyEntryBind
Description: Bind locations on which HAProxy will listen for inbound connections.

Parameter: sharedSettings
Type: HAProxySharedSettings
Description: HAProxySharedSettings

Parameter: useCustomSettings
Type: boolean
Description: Instead of using the global default settings, use the values in the 'shared settings' fields. This applies only to NON-server related values.

Parameter: useCustomServerSettings
Type: boolean
Description: Instead of using the global default settings, use the values in the 'shared settings' fields. This applies only to server-related values.

Parameter: servers
Type: list of HAProxyServer
Description: Backend servers

Parameter: customCode
Type: string
Description: Custom HAProxy config content to embed with this entry.

Parameter: customCodeAfterServers
Type: string
Description: Custom HAProxy config content to embed with this entry, following the server list.

Parameter: isOpenStackEntry

Type: boolean

Description: *none*

Parameter: openStackEntryType

Type: string

Description: *none*

5.2.171 HAProxyRole : Role

parent : Role

Parameter: HAProxyName

Type: string

Description: Name of the HAProxy. Can be referred to from API Endpoint roles to limit them to certain HAProxies.

Parameter: logTag

Type: string

Description: Log tag, use '\$hostname' for host's name, leave empty for IP.

Parameter: sharedSettings

Type: HAProxySharedSettings

Description: Settings

Parameter: description

Type: string

Description: Description of the proxy.

Parameter: log

Type: string

Description: Log description.

Parameter: maxConnections

Type: integer

Description: Max process connections.

Parameter: maxConnectionRate

Type: integer

Description: Max connections per seconds.

Parameter: entries

Type: list of HAProxyEntry

Description: Manually managed entries.

Parameter: addEndpointsFromOpenStack

Type: boolean

Description: Whether to automatically inject OpenStack API endpoints. Needs to be enabled for any of the 'Include ... endpoints' fields to take effect.

Parameter: isBackupBackend

Type: boolean

Description: Use it as backend HAProxy if no RR-DNS was configured, and non-backup proxies went down.

Parameter: `isOpenStackBackendHAProxy`

Type: boolean

Description: Whether to use it in config files of openstack services. If multiple backend HAProxies exists, services will be automatically spread across them.

Parameter: `availabilityZone`

Type: string

Description: The name of the availability zone of this HAProxy endpoint. Useful when partitioning the control plane to multiple AZs.

Parameter: `onlyAutoIncludeEndpointsFromSameAZ`

Type: boolean

Description: During automatic endpoint assignemnt to this role, only the endpoints from the same Availability Zone will be considered. To configure a node to be in an availability zone, configure a Host Aggregate.

Parameter: `backendWeight`

Type: float

Description: The default backend weight.

Parameter: `includeOpenStackComputeEndpoints`

Type: boolean

Description: If enabled, CMDaemon will automatically inject the API endpoints of this type into the config file of HAProxy. It will automatically determine the destination port and host.

Parameter: `includeOpenStackComputeMetadataEndpoints`

Type: boolean

Description: If enabled, CMDaemon will automatically inject the API endpoints of this type into the config file of HAProxy. It will automatically determine the destination port and host.

Parameter: `includeOpenStackComputeEC2Endpoints`

Type: boolean

Description: If enabled, CMDaemon will automatically inject the API endpoints of this type into the config file of HAProxy. It will automatically determine the destination port and host.

Parameter: `includeOpenStackComputePlacementEndpoints`

Type: boolean

Description: If enabled, CMDaemon will automatically inject the API endpoints of this type into the config file of HAProxy. It will automatically determine the destination port and host.

Parameter: `includeOpenStackNetworkEndpoints`

Type: boolean

Description: If enabled, CMDaemon will automatically inject the API endpoints of this type into the config file of HAProxy. It will automatically determine the destination port and host.

Parameter: `includeOpenStackAuthPublicEndpoints`

Type: boolean

Description: If enabled, CMDaemon will automatically inject the API endpoints of this type into the config file of HAProxy. It will automatically determine the destination port and host.

Parameter: `includeOpenStackAuthAdminEndpoints`

Type: boolean

Description: If enabled, CMDaemon will automatically inject the API endpoints of this type into the config file of HAProxy. It will automatically determine the destination port and host.

Parameter: `includeOpenStackImageStorageEndpoints`

Type: boolean

Description: If enabled, CMDaemon will automatically inject the API endpoints of this type into the config file of HAProxy. It will automatically determine the destination port and host.

Parameter: `includeOpenStackImageStorageRegistries`

Type: boolean

Description: If enabled, CMDaemon will automatically inject the API endpoints of this type into the config file of HAProxy. It will automatically determine the destination port and host.

Parameter: `includeOpenStackBlockStorageEndpoints`

Type: boolean

Description: If enabled, CMDaemon will automatically inject the API endpoints of this type into the config file of HAProxy. It will automatically determine the destination port and host.

Parameter: `includeOpenStackOrchestrationEndpoints`

Type: boolean

Description: If enabled, CMDaemon will automatically inject the API endpoints of this type into the config file of HAProxy. It will automatically determine the destination port and host.

Parameter: `includeOpenStackDashboardEndpoints`

Type: boolean

Description: If enabled, CMDaemon will automatically inject the API endpoints of this type into the config file of HAProxy. It will automatically determine the destination port and host.

Parameter: `includeOpenStackObjectStorageEndpoints`

Type: boolean

Description: If enabled, CMDaemon will automatically inject the API endpoints of this type into the config file of HAProxy. It will automatically determine the destination port and host.

Parameter: `includeOpenStackTelemetryEndpoints`

Type: boolean

Description: If enabled, CMDaemon will automatically inject the API endpoints of this type into the config file of HAProxy. It will automatically determine the destination port and host.

Parameter: `includeOpenStackBareMetalEndpoints`

Type: boolean

Description: If enabled, CMDaemon will automatically inject the API endpoints of this type into the config file of HAProxy. It will automatically determine the destination port and host.

Parameter: `includeOpenStackDataProcessingEndpoints`

Type: boolean

Description: If enabled, CMDaemon will automatically inject the API endpoints of this type into the config file of HAProxy. It will automatically determine the destination port and host.

Parameter: `includeMemcachedEndpoints`

Type: boolean

Description: If enabled, CMDaemon will automatically inject the API endpoints of this type into the config file of HAProxy. It will automatically determine the destination port and host.

Parameter: `includeElasticSearchEndpoints`

Type: boolean

Description: If enabled, CMDaemon will automatically inject the API endpoints of this type into the config file of HAProxy. It will automatically determine the destination port and host.

Parameter: `galeraClusterName`

Type: string

Description: The name of the galera cluster which is to be associated with this HAProxy instance. If set, CMDaemon will automatically inject the HAProxy entry to forward SQL traffic to this particular cluster. 'Include galera endpoints' must also be set.

Parameter: `includeGaleraEndpoints`

Type: boolean

Description: If enabled, CMDaemon will automatically inject the API endpoints of this type into the config file of HAProxy. It will automatically determine the destination port and host.

Parameter: `customGlobalCode`

Type: string

Description: Custom HAProxy config code to add to the global section of the HAProxy config file.

Parameter: `customDefaultCode`

Type: string

Description: Custom HAProxy config code to add to the 'defaults' section of the HAProxy config file. Those entries, unless redefined, will apply to all 'listen' sections.

Parameter: `customAppendCode`

Type: string

Description: Custom HAProxy config code to append to each 'listen' section of the HAProxy config file.

Parameter: `preferIPs`

Type: boolean

Description: Prefer IPs in the config file. Can be overridden on server level.

Parameter: `preserveOpenStackEntriesWithCustomServers`

Type: boolean

Description: Whether or not to preserve openstack Entries which have non-openstack server entries.

Parameter: `statsSocketEnabled`

Type: boolean

Description: Enables socket which can be used to obtain stats from the process.

Parameter: `statsSocket`

Type: string

Description: Location of the stats socket. Optional.

Parameter: `statsEnabled`

Type: boolean

Description: Whether to enable statistics collection.

Parameter: `statsScopes`

Type: list of strings

Description: List of scope of statistic to activate (the 'stats scope ...' directive). If empty, all stats will be displayed.

Parameter: `statsPort`

Type: unsigned integer

Description: Port on which statistics can be accessed.

Parameter: `statsUseAuth`

Type: boolean

Description: Whether to authenticate users trying to access statistics.

Parameter: `statsUsername`

Type: string

Description: The username.

Parameter: `statsPassword`

Type: string

Description: The password.

Parameter: `statsURI`

Type: string

Description: URI under which one can access statistics.

Parameter: `openStackEndpointDefaultBindLocation`

Type: string

Description: Advanced option. Path to the socket on which HAProxy should listen for connections for automatically added OpenStack endpoints. Setting this, will disable listening for connection on network interfaces.

Parameter: `openStackEndpointDefaultBindNetwork`

Type: reference to Network or None

Description: Default network to listen for connections for automatically created OpenStack endpoints. If not set, listen on all interfaces.

Parameter: `nbProc`

Type: unsigned integer

Description: Number of HAProxy processes. Typically only 1 should be used. It's useful to increase it if number of file descriptors per process is being reached. See 'nbproc' in HAProxy documentation for more info.

Parameter: `cpuMap`

Type: list of strings

Description: Allows to bind the HAProxy process to specific CPUs. See 'cpu-map' in HAProxy documentation for more info.

5.2.172 HAProxyServer:Entity

parent: Entity

Parameter: `name`

Type: string

Description: The human readable name of the server entry.

Parameter: `address`

Type: string

Description: The IP address or hostname of the server. Specify this one, or (in separate fields of this object) a list of nodes in the 'nodes' field, or a node category.

Parameter: `port`

Type: integer

Description: The port on which the service listens for connections on this server.

Parameter: `nodes`

Type: list of references to Node

Description: List of nodes belonging to this group.

Parameter: `category`

Type: reference to Category

Description: All nodes of the selected category will be used as servers for this endpoint.

Parameter: `network`

Type: reference to Network

Description: Network on which any specified nodes will listen (optional)

Parameter: `secondaryNetwork`

Type: reference to Network

Description: Network to try if the primary network is not configure on the node

Parameter: forceIPs

Type: enum

Description: Whether to prefer IPs or hostnames in the config file

Parameter: backup

Type: boolean

Description: If 'true', only used when all non-backup servers are unavailable.

Parameter: check

Type: boolean

Description: Whether to enable TCP checks, if the TCP healthcheck fails, HAProxy will not route traffic to this server.

Parameter: disabled

Type: boolean

Description: This will disable the server entry in HAProxy.

Parameter: useCustomServerSettings

Type: boolean

Description: Whether to use custom (non-global default) settings for this server entry.

Parameter: inter

Type: string

Description: Interval between two consecutive TCP health check. Checks need to be enabled with 'check' field.

Parameter: fastInter

Type: string

Description: Interval between two consecutive health checks when the server is any of the transition states. If not specified, defaults to 'inter'.

Parameter: downInter

Type: string

Description: Interval between two consecutive health checks when the server is in the DOWN state. If not specified, defaults to 'inter'.

Parameter: rise

Type: integer

Description: Number of consecutive valid health checks before considering the server as UP.

Parameter: fall

Type: integer

Description: Number of consecutive invalid health checks before considering the server as DOWN.

Parameter: `maxConn`

Type: integer

Description: Maximum number of allowed open connections to server, 0: unlimited.

Parameter: `minConn`

Type: integer

Description: When set, makes the 'maxconn' parameter dynamically adjust to backend's load.

Parameter: `maxQueue`

Type: integer

Description: Specifies the maximal number of connections which will wait in the queue for this server. '0' means 'unlimited'.

Parameter: `weight`

Type: integer

Description: Used to adjust server's weight relative to other servers. The default weight is 1, and the maximal value is 256. A value of 0 means the server will not participate in load-balancing but will still accept persistent connections.

Parameter: `customOptions`

Type: string

Description: *none*

Parameter: `isOpenStackManagedServer`

Type: boolean

Description: *none*

5.2.173 HAProxySharedSettings: Entity

parent: Entity

Parameter: `proxyMode`

Type: enum

Description: How the traffic is load-balanced by HAProxy.

Parameter: `balanceMode`

Type: enum

Description: How the traffic is load-balanced

Parameter: `balanceArgument`

Type: string

Description: Only applies to certain balance modes

Parameter: `balanceArguments`

Type: string

Description: Only apply to certain balance modes

Parameter: `optionRedispatch`

Type: boolean

Description: Whether to redistributed a sessions in case of connection failure. Works only with HTTP mode

Parameter: `optionTCPLog`

Type: `boolean`

Description: Enable advanced logging of TCP connections with session state and timers.

Parameter: `maxConnections`

Type: `integer`

Description: Maximum number of concurrent connections.

Parameter: `timeoutConnect`

Type: `string`

Description: The maximum time to wait for a connection attempt to a server to succeed.

Parameter: `timeoutClient`

Type: `string`

Description: The maximum inactivity time on the client side.

Parameter: `timeoutServer`

Type: `string`

Description: The maximum inactivity time on the server side.

Parameter: `disabled`

Type: `boolean`

Description: Whether to temporarily disable this entry.

Parameter: `retries`

Type: `integer`

Description: The number of retries to perform on a server after a connection failure.

Parameter: `log`

Type: `string`

Description: *none*

Parameter: `defaultServerInter`

Type: `string`

Description: Interval between two consecutive TCP health check. Checks need to be enabled with 'check' field.

Parameter: `defaultServerFastInter`

Type: `string`

Description: Interval between two consecutive health checks when the server is any of the transition states. If not specified, defaults to 'inter'.

Parameter: `defaultServerDownInter`

Type: `string`

Description: Interval between two consecutive health checks when the server is in the DOWN state. If not specified, defaults to 'inter'.

Parameter: defaultServerRise

Type: integer

Description: Number of consecutive valid health checks before considering the server as UP.

Parameter: defaultServerFall

Type: integer

Description: Number of consecutive invalid health checks before considering the server as DOWN.

Parameter: defaultServerMaxConn

Type: integer

Description: Maximum number of allowed open connections to server, 0: unlimited.

Parameter: defaultServerMinConn

Type: integer

Description: When set, makes the 'maxconn' parameter dynamically adjust to backend's load.

Parameter: defaultServerMaxQueue

Type: integer

Description: Specifies the maximal number of connections which will wait in the queue for this server. '0' means 'unlimited'.

Parameter: defaultServerWeight

Type: integer

Description: Used to adjust server's weight relative to other servers. The default weight is 1, and the maximal value is 256. A value of 0 means the server will not participate in load-balancing but will still accept persistent connections.

5.2.174 HeadNodeRole : Role

parent : Role

Parameter: failoverId

Type: unsigned integer

Description: *none*

Parameter: disableAutomaticExports

Type: boolean

Description: Disable creation of automatic filesystem exports

5.2.175 HeadNode : Node

parent : Node

5.2.176 IBSwitch : Switch

parent : Switch

Parameter: guid

Type: string

Description: The switch GUID

Parameter: subnetManager

Type: boolean

Description: Indicate the subnet manager is running

5.2.177 IPCPerm : Entity

parent : Entity

Parameter: key

Type: integer

Description: Message queue ID

Parameter: mode

Type: unsigned integer

Description: Access permissions

Parameter: uid

Type: integer

Description: Owner ID

Parameter: gid

Type: integer

Description: Owner group ID

Parameter: owner

Type: string

Description: Owner

Parameter: group

Type: string

Description: Group name

5.2.178 IPResource : BasicResource

parent : BasicResource

Parameter: ip

Type: IP

Description: IP

Parameter: networkDeviceName

Type: string

Description: The network device name to start this IP on. Leave blank to automatically determine based on IP.

Parameter: alias

Type: string

Description: The network device name alias

Parameter: timeout

Type: unsigned integer

Description: Timeout

5.2.179 JobInfoStatistics : Entity

parent : Entity

Parameter: refWlmClusterUniqueKey

Type: unsigned integer

Description: WlmCluster

Parameter: refJobQueueUniqueKey

Type: unsigned integer

Description: Queue

Parameter: user

Type: string

Description: none

Parameter: group

Type: string

Description: none

Parameter: account

Type: string

Description: none

Parameter: parentId

Type: string

Description: none

Parameter: intervalStart

Type: timestamp

Description: none

Parameter: intervalEnd

Type: timestamp

Description: none

Parameter: pending

Type: unsigned integer

Description: none

Parameter: running

Type: unsigned integer

Description: none

Parameter: finished

Type: unsigned integer

Description: none

Parameter: error
Type: unsigned integer
Description: none

Parameter: total
Type: unsigned integer
Description: none

Parameter: pendingTime
Type: unsigned integer
Description: none

Parameter: runningTime
Type: unsigned integer
Description: none

Parameter: finishedTime
Type: unsigned integer
Description: none

Parameter: errorTime
Type: unsigned integer
Description: none

Parameter: nodes
Type: unsigned integer
Description: none

5.2.180 JobInfo : Entity

parent : Entity
Parameter: refWlmClusterUniqueKey
Type: unsigned integer
Description: WlmCluster

Parameter: refJobQueueUniqueKey
Type: unsigned integer
Description: Queue

Parameter: jobId
Type: string
Description: Job ID

Parameter: jobName
Type: string
Description: Job name

Parameter: user

Type: string

Description: User name

Parameter: group

Type: string

Description: User group name

Parameter: account

Type: string

Description: Job account

Parameter: parentId

Type: string

Description: Parent ID

Parameter: nodes

Type: list of unsigned numbers

Description: List of job's nodes

Parameter: cgroup

Type: string

Description: Relative cgroup path

Parameter: submitTime

Type: timestamp

Description: Job submit time

Parameter: startTime

Type: timestamp

Description: Job start time

Parameter: endTime

Type: timestamp

Description: Job end time

Parameter: persistent

Type: boolean

Description: Whether job is persistent in DB or not

Parameter: exitCode

Type: integer

Description: Jobscrip exit code

Parameter: state

Type: string

Description: Job status

5.2.181 JobQueuePlaceholder : Entity**parent** : Entity**Parameter:** queue**Type:** string**Description:** Name of queue**Parameter:** baseNodeName**Type:** string**Description:** Placeholder node base name**Parameter:** maxNodes**Type:** unsigned integer**Description:** Maximum number of nodes in queue**Parameter:** templateNode**Type:** reference to Node**Description:** Node that will be used as a placeholder**5.2.182** JobQueueStat : Entity**parent** : Entity**Parameter:** name**Type:** string**Description:** Queue name**5.2.183** JobQueue : Entity**parent** : Entity**Parameter:** name**Type:** string**Description:** Name of queue**Parameter:** wlmCluster**Type:** reference to WlmCluster**Description:** WlmCluster to which this node belongs**Parameter:** options**Type:** list of strings**Description:** Additional parameters that will be passed to the WLM queue configuration**5.2.184** Job : Entity**parent** : Entity**Parameter:** refWlmClusterUniqueKey**Type:** unsigned integer**Description:** WlmCluster**Parameter:** refJobQueueUniqueKey**Type:** unsigned integer**Description:** Queue name

Parameter: jobID

Type: string

Description: Job identifier

Parameter: arrayID

Type: string

Description: Job array identifier

Parameter: taskID

Type: string

Description: Job array task identifier(s)

Parameter: parentID

Type: string

Description: Job parent identifier

Parameter: jobname

Type: string

Description: Name of job

Parameter: username

Type: string

Description: Job owner name

Parameter: status

Type: string

Description: Current job status

Parameter: project

Type: string

Description: Project name

Parameter: priority

Type: string

Description: Job priority

Parameter: inqueue

Type: string

Description: Shows whether job has already been queued or not

Parameter: nodes

Type: list of strings

Description: Allocated nodes

Parameter: cgroup

Type: string

Description: CGroup allocated for this job on all nodes

Parameter: rundirectory

Type: string

Description: Job work directory

Parameter: executable

Type: string

Description: File which is executed inside job script

Parameter: arguments

Type: string

Description: Arguments of executable file

Parameter: stdinfile

Type: string

Description: Standard input file

Parameter: stdoutfile

Type: string

Description: Standard output file

Parameter: stderrfile

Type: string

Description: Standard error file

Parameter: submittime

Type: string

Description: Job submission time

Parameter: starttime

Type: string

Description: Job start time (available when job is started)

Parameter: mailOptions

Type: string

Description: Mail oprions

Parameter: mailList

Type: string

Description: Mail addresses

Parameter: mailNotify

Type: boolean

Description: Shows whether mail notification is requested or not

Parameter: maxWallClock

Type: string

Description: Maximum available running time

Parameter: runWallClock

Type: unsigned integer

Description: Running time

Parameter: numberOfProcesses

Type: unsigned integer

Description: Number of processes

Parameter: memoryUse

Type: unsigned integer

Description: Memory usage

Parameter: scriptFile

Type: string

Description: Job script file

Parameter: numberOfNodes

Type: unsigned integer

Description: Number of nodes

Parameter: usergroup

Type: string

Description: Job user group

Parameter: commandLineInterpreter

Type: string

Description: Command line interpreter

Parameter: dependencies

Type: list of strings

Description: Job dependencies

Parameter: parallelEnvironment

Type: string

Description: Parallel environment

Parameter: account

Type: string

Description: Account name

Parameter: resourceList

Type: list of strings

Description: List of requested resources

Parameter: `modules`

Type: list of strings

Description: Environment modules loaded for the script

Parameter: `environmentVariables`

Type: list of strings

Description: Additional environment variables

Parameter: `debug`

Type: boolean

Description: Debug mode (used when new job is submitted via CMDaemon API)

Parameter: `userdefined`

Type: list of strings

Description: User defined parameters

Parameter: `numberOfCPUs`

Type: unsigned integer

Description: Number of CPUs requested

Parameter: `numberOfGPUs`

Type: unsigned integer

Description: Number of GPUs requested

Parameter: `exitCode`

Type: integer

Description: Exit code of job

Parameter: `minMemPerNode`

Type: unsigned integer

Description: Minimum memory per node requested

Parameter: `comment`

Type: string

Description: Comment set by workload manager

Parameter: `placement`

Type: string

Description: Jobs are placed on nodes according to their place statements (useful for PBS, see 'man pbs_resources')

Parameter: `pendingReasons`

Type: list of strings

Description: List of pending reasons

5.2.185 JupyterHubBatchSpawner : JupyterHubSpawner

parent : JupyterHubSpawner

Parameter: `wlmCluster`

Type: reference to `WlmCluster`

Description: WLM cluster that is associated with this batch spawner

Parameter: `startupPollInterval`

Type: unsigned integer

Description: Polling interval (seconds) to check job state during startup (`BatchSpawnerBase.startup_poll_interval`)

Parameter: `numberOfProcessors`

Type: unsigned integer

Description: Number of processors to request from workload manager (`BatchSpawnerBase.req_nprocs`)

Parameter: `numberOfGpus`

Type: unsigned integer

Description: Number of GPUs to request from workload manager (`BatchSpawnerBase.req_ngpus`)

Parameter: `queue`

Type: string

Description: Queue name to submit job to workload manager (`BatchSpawnerBase.req_queue`)

Parameter: `host`

Type: string

Description: Host name of batch server to submit job to workload manager (`BatchSpawnerBase.req_host`)

Parameter: `account`

Type: string

Description: Account name string to pass to the workload manager (`BatchSpawnerBase.req_account`)

Parameter: `runtime`

Type: string

Description: Length of time for submitted job to run (`BatchSpawnerBase.req_runtime`)

Parameter: `memory`

Type: string

Description: Memory to request from workload manager (`BatchSpawnerBase.req_memory`)

Parameter: `submitCommand`

Type: string

Description: Command to run to submit batch scripts (`BatchSpawnerBase.batch_submit_cmd`)

Parameter: `queryCommand`

Type: string

Description: Command to run to read job status (`BatchSpawnerBase.batch_query_cmd`)

Parameter: `cancelCommand`

Type: string

Description: Command to cancel a previously submitted job (`BatchSpawnerBase.batch_cancel_cmd`)

Parameter: batchScript

Type: string

Description: Template for job submission script (BatchSpawnerBase.batch_script)

5.2.186 JupyterHubGenericSpawner : JupyterHubSpawner

parent : JupyterHubSpawner

5.2.187 JupyterHubLocalProcessSpawner : JupyterHubSpawner

parent : JupyterHubSpawner

Parameter: interruptTimeout

Type: unsigned integer

Description: Seconds to wait for single-user server process to halt after SIGINT (LocalProcessSpawner.interrupt_timeout)

Parameter: termTimeout

Type: unsigned integer

Description: Seconds to wait for single-user server process to halt after SIGTERM (LocalProcessSpawner.term_timeout)

Parameter: killTimeout

Type: unsigned integer

Description: Seconds to wait for process to halt after SIGKILL before giving up (LocalProcessSpawner.kill_timeout)

5.2.188 JupyterHubLsfSpawner : JupyterHubBatchSpawner

parent : JupyterHubBatchSpawner

5.2.189 JupyterHubRole : Role

parent : Role

Parameter: version

Type: string

Description: JupyterHub version

Parameter: port

Type: unsigned integer

Description: Port for proxy (JupyterHub.port)

Parameter: hubPort

Type: unsigned integer

Description: Port for hub (JupyterHub.hub_port)

Parameter: hubIp

Type: string

Description: The ip address or hostname for the Hub process to bind to (JupyterHub.hub_ip)

Parameter: dataFilesPath

Type: string

Description: The location of jupyterhub data files (JupyterHub.data_files_path)

Parameter: pamOpenSessions

Type: boolean

Description: Enable SSL communication with HTTPS (PAMAuthenticator.open_sessions)

Parameter: enableSSL

Type: boolean

Description: Enable SSL communication with HTTPS

Parameter: cert

Type: string

Description: Path to the ssl certificate file (JupyterHub.ssl_cert)

Parameter: key

Type: string

Description: Path to the ssl key file (JupyterHub.ssl_key)

Parameter: adminUsers

Type: list of strings

Description: User with administrator privileges (Authenticator.admin_users)

Parameter: userForService

Type: string

Description: User for running cm-jupyterhub service (defined as User in /usr/lib/systemd/system/cm-jupyterhub.service)

Parameter: spawner

Type: JupyterHubSpawner

Description: Spawner settings

5.2.190 JupyterHubSlurmSpawner : JupyterHubBatchSpawner

parent : JupyterHubBatchSpawner

5.2.191 JupyterHubSpawner : Entity

parent : Entity

Parameter: name

Type: string

Description: The spawner name (not used in jupyterhub configuration)

Parameter: className

Type: string

Description: The spawner class name (JupyterHub.spawner_class)

Parameter: args

Type: list of strings

Description: Extra arguments to be passed to the single-user server (Spawner.args)

Parameter: envKeep

Type: list of strings

Description: Environment variables to keep for the spawner (Spawner.env_keep)

Parameter: envs

Type: list of strings

Description: Extra environment variables to set for the single-user server's process (Spawner.environment)

Parameter: startTimeout

Type: unsigned integer

Description: Timeout (in seconds) before giving up on starting of single-user server (Spawner.start_timeout)

Parameter: pollInterval

Type: unsigned integer

Description: Interval (in seconds) on which to poll the spawner for single-user server's status (Spawner.poll_interval)

Parameter: httpTimeout

Type: unsigned integer

Description: Timeout (in seconds) before giving up on a spawned HTTP server (Spawner.http_timeout)

Parameter: address

Type: string

Description: Hostname or IP address the single-user server should listen on (Spawner.ip)

Parameter: port

Type: unsigned integer

Description: The port for single-user servers to listen on, where 0 uses a randomly allocated port number each time (Spawner.port)

Parameter: notebookDirectory

Type: string

Description: Path to the notebook directory for the single-user server (Spawner.notebook_dir)

Parameter: disableUserConfig

Type: boolean

Description: Disable per-user configuration of single-user servers (Spawner.disable_user_config)

Parameter: debug

Type: boolean

Description: Enable debug mode for the spawner (Spawner.debug)

Parameter: options

Type: list of strings

Description: List of extra options (example: c.Spawner.cpu_limit=0.5)

5.2.192 JupyterHubSystemdSpawner : JupyterHubSpawner

parent : JupyterHubSpawner

Parameter: readOnlyPaths

Type: list of strings

Description: List of filesystem paths that should be mounted readonly for the users' notebook server (SystemdSpawner.readonly_paths)

Parameter: readWritePaths

Type: list of strings

Description: List of filesystem paths that should be mounted readwrite for the users notebook server (SystemdSpawner.readwrite_paths)

Parameter: extraPaths

Type: list of strings

Description: List of paths that should be prepended to the PATH environment variable for the spawned notebook server (SystemdSpawner.extra_paths)

Parameter: isolateDevices

Type: boolean

Description: Setting this to true provides a separate, private /dev for each user (SystemdSpawner.isolate_devices)

Parameter: isolateTmp

Type: boolean

Description: Setting this to true provides a separate, private /tmp for each user (SystemdSpawner.isolate_tmp)

Parameter: cpuLimit

Type: float

Description: A float representing the total CPU-cores each user can use (SystemdSpawner.cpu_limit)

Parameter: memoryLimit

Type: string

Description: Specifies the maximum memory that can be used by each individual user (SystemdSpawner.mem_limit)

Parameter: unitNameTemplate

Type: string

Description: Template to form the Systemd Service unit name for each user notebook server (SystemdSpawner.unit_name_template)

Parameter: defaultShell

Type: string

Description: The default shell to use for the terminal in the notebook (SystemdSpawner.default_shell)

Parameter: userWorkingDirectory

Type: string

Description: The directory to spawn each user's notebook server in (SystemdSpawner.user_workingdir)

Parameter: disableUserSudo

Type: boolean

Description: Setting this to true prevents users from being able to use sudo (SystemdSpawner.disable_user_sudo)

Parameter: useSudo

Type: boolean

Description: Use sudo to run systemd-run / systemctl commands (SystemdSpawner.use_sudo)

5.2.193 JupyterHubUgeSpawner : JupyterHubBatchSpawner**parent** : JupyterHubBatchSpawner**5.2.194** KeepalivedEntry : Entity**parent** : Entity**Parameter:** name**Type:** string**Description:** The name of the entry.**Parameter:** checkScriptName**Type:** string**Description:** Name of the check script to run (must be defined in the config file)**Parameter:** customContent**Type:** string**Description:** Custom content to inject to config**Parameter:** customContentVIP**Type:** string**Description:** Custom content to inject to config's Virtual IP section**Parameter:** password**Type:** string**Description:** VRRP Password (optional)**Parameter:** virtualRouterID**Type:** unsigned integer**Description:** Unique and identical for all instances in this cluster**Parameter:** priority**Type:** unsigned integer**Description:** Priority of an instance**Parameter:** advertisementInterval**Type:** unsigned integer**Description:** Advertise every this many seconds**Parameter:** virtualIP1**Type:** IP**Description:** First virtual IP**Parameter:** virtualIP2**Type:** IP**Description:** Seconds virtual IP (optional)**Parameter:** virtualIP3**Type:** IP

Description: Third virtual IP (optional)

Parameter: network

Type: reference to Network

Description: The network on which the virtual IP should be present.

5.2.195 KeepalivedRole : Role

parent : Role

Parameter: description

Type: string

Description: Description of the keepalived service (optional)

Parameter: customContent

Type: string

Description: Custom content to inject to config (optional)

Parameter: checkScriptName

Type: string

Description: use in an VRRP entry to make that entry use the script

Parameter: checkScriptPath

Type: string

Description: Command to execute (optional)

Parameter: checkScriptInterval

Type: unsigned integer

Description: Run script every so many many seconds

Parameter: checkScriptFall

Type: unsigned integer

Description: Treat service as down after that many failures of script

Parameter: checkScriptRise

Type: unsigned integer

Description: Treat service as up after that many failures of script

Parameter: configFilePath

Type: string

Description: Path to the config file

Parameter: configDirPath

Type: string

Description: Config directory

Parameter: serviceName

Type: string

Description: Linux service name

Parameter: entries
Type: list of KeepalivedEntry
Description: VRRP entries

5.2.196 KernelModule : Entity

parent : Entity
Parameter: name
Type: string
Description: The name of the kernel module.

Parameter: parameters
Type: string
Description: Options to be passed to the module.

5.2.197 KeyValuePair : Entity

parent : Entity
Parameter: key
Type: string
Description: *none*

Parameter: value
Type: string
Description: *none*

Parameter: onlydaemon
Type: boolean
Description: *none*

Parameter: ispattern
Type: boolean
Description: *none*

Parameter: priority
Type: integer
Description: *none*

5.2.198 KibanaRole : Role

parent : Role
Parameter: bindHost
Type: string
Description: IP address to which Kibana should bind to (listen for connections).

Parameter: port
Type: unsigned integer
Description: Port on which Kibana should listen.

Parameter: elasticUrl
Type: string

Description: Elastic Search URL. If not specified, will be detected automatically.

Parameter: customConfig

Type: string

Description: Use this field to override the entire Kibana config file.

5.2.199 KubeAppEnvironment : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: value

Type: string

Description: Value

Parameter: nodesEnvironment

Type: boolean

Description: Add variable to the nodes environment

5.2.200 KubeAppGroup : Entity

parent : Entity

Parameter: name

Type: string

Description: Object name

Parameter: applications

Type: list of KubeApp

Description: Kubernetes applications managed by cmdaemon

Parameter: enabled

Type: boolean

Description: Enable this application group

5.2.201 KubeApp : Entity

parent : Entity

Parameter: name

Type: string

Description: Object name

Parameter: format

Type: string

Description: Configuration format

Parameter: enabled

Type: boolean

Description: Enable this application

Parameter: config
Type: string
Description: Yaml or json configuration for the object

Parameter: extraEnvironment
Type: list of KubeAppEnvironment
Description: none

Parameter: excludeList
Type: list of strings
Description: Excluded paths in the node image update for Kubernetes nodes

Parameter: state
Type: integer
Description: none

5.2.202 KubeCluster:Entity

parent: Entity
Parameter: name
Type: string
Description: Name of the Kubernetes cluster

Parameter: authorizationMode
Type: list of strings
Description: Selects how to do authorization on the secure port

Parameter: kubeConfig
Type: string
Description: Path to a kubeconfig file, specifying how to authenticate to API server

Parameter: kubeClientConfig
Type: string
Description: Path to a kubeconfig file, specifying how to authenticate to API server

Parameter: kubeConfigTemplate
Type: string
Description: Template for system kubeconfig file

Parameter: ca
Type: string
Description: Filename containing the PEM-encoded certificate used for the Certification authority (CA)

Parameter: cakey
Type: string
Description: Filename containing the corresponding PEM-encoded private key used for the Certification authority (CA)

Parameter: `kubernetesCertificate`

Type: `string`

Description: File containing x509 Certificate used by the Kubelets

Parameter: `kubernetesKey`

Type: `string`

Description: File containing x509 private key used by the Kubelets

Parameter: `kubernetesClientCertificate`

Type: `string`

Description: File containing x509 Certificate used for the Kubelets

Parameter: `kubernetesClientKey`

Type: `string`

Description: File containing x509 private key used for the Kubelets

Parameter: `serviceAccountCertificate`

Type: `string`

Description: File containing x509 Certificate used Service Accounts

Parameter: `serviceAccountKey`

Type: `string`

Description: File containing x509 private key used for Service Accounts

Parameter: `apiAggregatorCertificate`

Type: `string`

Description: File containing x509 Certificate used Kube API Aggregator

Parameter: `apiAggregatorKey`

Type: `string`

Description: File containing x509 private key used for Kube API Aggregator

Parameter: `domain`

Type: `string`

Description: Domain name used by the DNS

Parameter: `etcdCluster`

Type: reference to `EtcdCluster`

Description: The Etcd cluster instance

Parameter: `etcdServers`

Type: list of strings

Description: List of etcd servers to watch (format: [http://host:port])

Parameter: `etcdPrefix`

Type: `string`

Description: The prefix for all resource paths in etcd

Parameter: serviceNetwork

Type: reference to Network

Description: Network where service cluster IPs will be assigned from (must not overlap with any IP ranges assigned to nodes for pods)

Parameter: podNetwork

Type: reference to Network

Description: Network where POD IPs will be assigned from

Parameter: podNetworkNodeMask

Type: string

Description: Pod Network mask size for node cidr in cluster.

Parameter: internalNetwork

Type: reference to Network

Description: Network to use to back the internal communications

Parameter: kubeDnsIp

Type: IP

Description: KubeDNS IP address

Parameter: kubernetesApiServer

Type: string

Description: Kubernetes API server address (format: [https://host:port])

Parameter: kubernetesApiServerProxyPort

Type: unsigned integer

Description: Kubernetes API server proxy port

Parameter: appGroups

Type: list of KubeAppGroup

Description: Kubernetes applications managed by cmdaemon

Parameter: labelSets

Type: list of KubeLabelSet

Description: Labels managed by cmdaemon

Parameter: notes

Type: string

Description: Notes

Parameter: trustedDomains

Type: list of strings

Description: Trusted domains to be included in Kubernetes related certificates as Alt Subjects.

Parameter: `clientTypeKube`

Type: unsigned integer

Description: client type in the CLIENT_TYPE_KUBERNETES range

Parameter: `clientTypeKubeUsers`

Type: unsigned integer

Description: client type in the CLIENT_TYPE_KUBERNETES_USERS range

Parameter: `clientTypeKubeServiceAccounts`

Type: unsigned integer

Description: client type in the CLIENT_TYPE_KUBE_SERVICEACCOUNTS range

Parameter: `moduleFileTemplate`

Type: string

Description: Template for system module file

Parameter: `InitializationState`

Type: enum

Description: Kube Cluster Initialization State

Parameter: `roleBindings`

Type: list of KubeRoleBinding

Description: Kubernetes role bindings

5.2.203 KubeLabelSet : Entity

parent : Entity

Parameter: `name`

Type: string

Description: Object name

Parameter: `labels`

Type: list of strings

Description: Node labels

Parameter: `nodes`

Type: list of references to Node

Description: List of nodes belonging to this label set

Parameter: `categories`

Type: list of references to Category

Description: List of categories belonging to this label set

Parameter: `overlays`

Type: list of references to ConfigurationOverlay

Description: List of overlays belonging to this label set

5.2.204 KubeNodeLoad : Entity**parent** : Entity**Parameter:** refNodeUniqueKey**Type:** unsigned integer**Description:** Node**Parameter:** cpu**Type:** float**Description:** CPU %**Parameter:** mem**Type:** float**Description:** Memory % of total capacity**Parameter:** pods**Type:** float**Description:** Pods % of maximum**5.2.205** KubePodController : Entity**parent** : Entity**Parameter:** name**Type:** string**Description:** Kubernetes pod controller name**Parameter:** type**Type:** string**Description:** Kubernetes pod controller type**Parameter:** kubeNamespace**Type:** string**Description:** Namespace name**Parameter:** uid**Type:** string**Description:** Pod controller unique ID in Kubernetes**Parameter:** startTime**Type:** timestamp**Description:** Pod controller start time**Parameter:** creationTime**Type:** timestamp**Description:** Pod controller creation time**Parameter:** resources**Type:** list of strings

Description: List of requested (if pending) or allocated (if started) resources

Parameter: labels

Type: list of strings

Description: List of labels assigned to the controller object

Parameter: status

Type: string

Description: Current pod controller status

Parameter: reason

Type: string

Description: Pod controller status reason

5.2.206 KubePodInfo : Entity

parent : Entity

Parameter: name

Type: string

Description: none

Parameter: podNamespace

Type: string

Description: none

Parameter: image

Type: string

Description: none

Parameter: nodes

Type: list of unsigned numbers

Description: none

Parameter: startTime

Type: timestamp

Description: none

Parameter: labels

Type: list of strings

Description: none

Parameter: status

Type: string

Description: none

Parameter: reason

Type: string

Description: none

Parameter: message

Type: string

Description: none

Parameter: ip

Type: IP

Description: none

Parameter: replicaSets

Type: list of strings

Description: none

Parameter: ready

Type: boolean

Description: none

Parameter: volumes

Type: list of strings

Description: none

Parameter: containers

Type: list of ContainerInfo

Description: none

Parameter: creationTime

Type: timestamp

Description: none

Parameter: controllerId

Type: string

Description: none

Parameter: resources

Type: list of strings

Description: List of requested (if pending) or allocated (if started) resources

5.2.207 [KubernetesApiServerProxyRole](#) : [NginxRole](#)

parent : [NginxRole](#)

Parameter: kubeClusters

Type: list of references to [KubeCluster](#)

Description: The Kubernetes cluster instances (pointers)

5.2.208 [KubernetesApiServerRole](#) : [Role](#)

parent : [Role](#)

Parameter: kubeCluster

Type: reference to [KubeCluster](#)

Description: The Kubernetes cluster instance (pointer)

Parameter: `insecurePort`

Type: unsigned integer

Description: The port on which to serve unsecured, unauthenticated access.

Parameter: `securePort`

Type: unsigned integer

Description: The port on which to serve HTTPS with authentication and authorization (if 0, don't serve HTTPS at all)

Parameter: `advertiseAddress`

Type: IP

Description: The IP address on which to advertise the apiserver to members of the cluster. When set to 0.0.0.0 the IP from the Headnode's Management Network will be used.

Parameter: `insecureBindAddress`

Type: IP

Description: IP address to serve on (set to 0.0.0.0 for all interfaces)

Parameter: `secureBindAddress`

Type: IP

Description: The IP address on which to serve the read only and secure ports

Parameter: `allowedPrivileged`

Type: boolean

Description: If true, allow privileged containers

Parameter: `admissionControl`

Type: list of strings

Description: Ordered list of plug-ins to do admission control of resources into cluster

Parameter: `eventTtl`

Type: string

Description: Amount of time to retain events

Parameter: `kubeletTimeout`

Type: string

Description: Kubelet connections timeout

Parameter: `logLevel`

Type: unsigned integer

Description: Log level

Parameter: `logToStdErr`

Type: boolean

Description: Logging to stderr means we get it in the systemd journal

Parameter: `options`

Type: list of strings

Description: Additional parameters for kube-apiserver daemon

5.2.209 KubernetesControllerRole : Role

parent : Role

Parameter: kubeCluster

Type: reference to KubeCluster

Description: The Kubernetes cluster instance (pointer)

Parameter: address

Type: IP

Description: IP address to serve on (set to 0.0.0.0 for all interfaces)

Parameter: port

Type: unsigned integer

Description: Port that the controller-manager runs on

Parameter: concurrentEndpointSyncs

Type: unsigned integer

Description: Number of endpoint syncing operations that will be done concurrently

Parameter: namespaceSyncPeriod

Type: string

Description: Period for syncing namespace life-cycle updates

Parameter: nodeMonitorGracePeriod

Type: string

Description: Amount of time which we allow running Node to be unresponsive before marking it unhealthy

Parameter: nodeMonitorPeriod

Type: string

Description: Period for syncing NodeStatus in NodeController

Parameter: nodeStartupGracePeriod

Type: string

Description: Amount of time which we allow starting Node to be unresponsive before marking it unhealthy

Parameter: nodeSyncPeriod

Type: string

Description: Period for syncing nodes from cloudprovider

Parameter: podEvictionTimeout

Type: string

Description: Grace period for deleting pods on failed nodes

Parameter: pvClaimBinderSyncPeriod

Type: string

Description: Period for syncing persistent volumes and persistent volume claims

Parameter: registerRetryCount

Type: string

Description: Number of retries for initial node registration

Parameter: resourceQuotaSyncPeriod

Type: string

Description: Period for syncing quota usage status in the system

Parameter: logLevel

Type: unsigned integer

Description: Log level

Parameter: logToStdErr

Type: boolean

Description: Logging to stderr means we get it in the systemd journal

Parameter: options

Type: list of strings

Description: Additional parameters for kube-controller-manager daemon

Parameter: clusterSigningCertFile

Type: string

Description: Filename containing a PEM-encoded X509 CA certificate used to issue cluster-scoped certificates. (leave empty to use the value of CA)

Parameter: clusterSigningKeyFile

Type: string

Description: Filename containing a PEM-encoded RSA or ECDSA private key used to sign cluster-scoped certificates. (leave empty to use the value of CA Key)

Parameter: useServiceAccountCredentials

Type: boolean

Description: Flag to enable or disable use of Service Account Credentials

Parameter: allocateNodeCidrs

Type: boolean

Description: Allocate node cidr in cluster using Pod Network and Node Mask size defined in Kubernetes Cluster Object

Parameter: kubeConfig

Type: string

Description: Path to a kubeconfig file, specifying how to authenticate to API server.

Parameter: kubernetesCertificate

Type: string

Description: File containing x509 Certificate used by Kubernetes Controller Manager

Parameter: `kubernetesKey`

Type: string

Description: File containing x509 private key used by Kubernetes Controller Manager

5.2.210 `KubernetesNodeRole` : `Role`

parent : `Role`

Parameter: `kubeCluster`

Type: reference to `KubeCluster`

Description: The Kubernetes cluster instance (pointer)

Parameter: `address`

Type: IP

Description: IP address to serve on (set to 0.0.0.0 for all interfaces)

Parameter: `kubeletPort`

Type: unsigned integer

Description: Port that the Node's http service runs on

Parameter: `spool`

Type: string

Description: Directory path for managing kubelet files

Parameter: `manifestsPath`

Type: string

Description: Path to the config file or directory of files

Parameter: `enableServer`

Type: boolean

Description: Enable Kubelet's server

Parameter: `networkPlugin`

Type: string

Description: The name of the network plugin to be invoked for various events in kubelet/pod lifecycle

Parameter: `cniPluginBinariesPath`

Type: string

Description: The full path of the directory in which to search for CNI plugin binaries.

Parameter: `hostnameOverride`

Type: string

Description: If non-empty, will use this string as identification instead of the actual hostname

Parameter: `cgroupRoot`

Type: string

Description: Optional root cgroup to use for pods

Parameter: containerRuntime

Type: string

Description: The container runtime to use

Parameter: containerRuntimeEndpoint

Type: string

Description: The endpoint of remote runtime service

Parameter: containerRuntimeService

Type: string

Description: The container runtime systemd service

Parameter: resourceContainer

Type: string

Description: Absolute name of the resource-only container to create and run the Kubelet in

Parameter: allowedPrivileged

Type: boolean

Description: If true, allow privileged containers

Parameter: registerOnStart

Type: boolean

Description: Register the node with the apiserver

Parameter: maxPods

Type: unsigned integer

Description: Number of Pods that can run on this node

Parameter: evictionSoft

Type: list of strings

Description: Soft eviction constraints

Parameter: evictionSoftGrace

Type: list of strings

Description: Soft eviction grace period

Parameter: evictionMaxPodGrace

Type: unsigned integer

Description: Maximum allowed grace period (in sec) allowed to terminated pods

Parameter: evictionHard

Type: list of strings

Description: Hard eviction constraints

Parameter: evictionMinReclaim

Type: list of strings

Description: Minimum amount of resources reclaimed in an eviction

Parameter: runOnce

Type: boolean

Description: If true, exit after spawning pods from local manifests or remote urls

Parameter: fileCheckFrequency

Type: string

Description: Duration between checking config files for new data

Parameter: httpCheckFrequency

Type: string

Description: Duration between checking http for new data

Parameter: nodeStatusUpdateFrequency

Type: string

Description: Duration between kubelet posts of node status to master

Parameter: syncFrequency

Type: string

Description: Max period between synchronizing running containers and config

Parameter: streamingConnectionIdleTimeout

Type: string

Description: Maximum time a streaming connection can be idle before the connection is automatically closed

Parameter: imageGcHighThreshold

Type: unsigned integer

Description: The percent of disk usage after which image garbage collection is always run

Parameter: imageGcLowThreshold

Type: unsigned integer

Description: The percent of disk usage before which image garbage collection is never run

Parameter: lowDiskSpaceThreshold

Type: unsigned integer

Description: The absolute free disk space, in MB, to maintain

Parameter: oomScoreAdjust

Type: integer

Description: The oom_score_adj value for kubelet process

Parameter: logLevel

Type: unsigned integer

Description: Log level

Parameter: logToStdErr

Type: boolean

Description: Logging to stderr means we get it in the systemd journal

Parameter: options

Type: list of strings

Description: Additional parameters for kubelet daemon

Parameter: kubeConfig

Type: string

Description: Path to a kubeconfig file, specifying how to authenticate to API server

5.2.211 `KubernetesProxyRole` : Role

parent : Role

Parameter: kubeCluster

Type: reference to KubeCluster

Description: The Kubernetes cluster instance (pointer)

Parameter: address

Type: IP

Description: IP address to serve on (set to 0.0.0.0 for all interfaces)

Parameter: proxyPortRangeStart

Type: unsigned integer

Description: Range of host ports (format: 'beginPort-endPort', inclusive) that may be consumed in order to proxy service traffic

Parameter: proxyPortRangeEnd

Type: unsigned integer

Description: Range of host ports (format: 'beginPort-endPort', inclusive) that may be consumed in order to proxy service traffic

Parameter: masqueradeAll

Type: boolean

Description: If using the pure iptables proxy, SNAT everything

Parameter: healthCheckAddress

Type: IP

Description: The IP address for the health check server to serve on

Parameter: healthCheckPort

Type: unsigned integer

Description: The port to bind the health check server (use 0 to disable)

Parameter: oomScoreAdjust

Type: integer

Description: The oom_score_adj value for kube-proxy process

Parameter: logLevel

Type: unsigned integer

Description: Log level

Parameter: logToStdErr

Type: boolean

Description: Logging to stderr means we get it in the systemd journal

Parameter: options

Type: list of strings

Description: Additional parameters for kube-proxy daemon

Parameter: kubeConfig

Type: string

Description: Path to a kubeconfig file, specifying how to authenticate to API server.

Parameter: kubernetesCertificate

Type: string

Description: File containing x509 Certificate used by kube-proxy

Parameter: kubernetesKey

Type: string

Description: File containing x509 private key used by Kubernetes API server

5.2.212 KubernetesSchedulerRole : Role

parent : Role

Parameter: kubeCluster

Type: reference to KubeCluster

Description: The Kubernetes cluster instance (pointer)

Parameter: address

Type: IP

Description: IP address to serve on (set to 0.0.0.0 for all interfaces)

Parameter: port

Type: unsigned integer

Description: Port that the scheduler's http service runs on

Parameter: algorithmProvider

Type: string

Description: The scheduling algorithm provider to use

Parameter: policyConfig

Type: string

Description: File with scheduler policy configuration

Parameter: logLevel

Type: unsigned integer

Description: Log level

Parameter: logToStdErr

Type: boolean

Description: Logging to stderr means we get it in the systemd journal

Parameter: options

Type: list of strings

Description: Additional parameters for kube-scheduler daemon

Parameter: kubeConfig

Type: string

Description: Path to a kubeconfig file, specifying how to authenticate to API server.

Parameter: kubernetesCertificate

Type: string

Description: File containing x509 Certificate used by Kubernetes Scheduler

Parameter: kubernetesKey

Type: string

Description: File containing x509 private key used by Kubernetes Scheduler

5.2.213 KubeRoleBinding: Entity

parent: Entity

Parameter: user

Type: string

Description: User name (not user ID)

Parameter: config

Type: string

Description: The RBAC config to apply for the user for the Kubernetes cluster.

Parameter: enabled

Type: boolean

Description: Enable this cluster binding

5.2.214 LabeledEntity: Entity

parent: Entity

Parameter: name

Type: string

Description: Name

Parameter: introductionTime

Type: timestamp

Description: Introduction time

Parameter: lastUsedTime
Type: timestamp
Description: Time entity was last used

Parameter: permanent
Type: boolean
Description: Do not allow automatic deletion

5.2.215 LdapServerRole : Role

parent : Role
Parameter: nodegroups
Type: list of references to NodeGroup
Description: List of node groups which can boot from this node

Parameter: categories
Type: list of references to Category
Description: List of categories which can boot from this node

Parameter: racks
Type: list of references to Rack
Description: List of racks which can boot from this node

5.2.216 LicenseInfo : Entity

parent : Entity
Parameter: refPartitionUniqueKey
Type: unsigned integer
Description: Partition

Parameter: macAddress
Type: string
Description: MAC address linked to the license

Parameter: licensedNodes
Type: unsigned integer
Description: Number of pre-paid nodes

Parameter: licensedAcceleratorNodes
Type: integer
Description: Number of licensed nodes with accelerators

Parameter: licensedBurstNodes
Type: integer
Description: Number of ondemand nodes

Parameter: licensedOpenStackNodes
Type: integer
Description: Number of OpenStack nodes

Parameter: version
Type: string
Description: Version

Parameter: edition
Type: string
Description: Edition

Parameter: startTime
Type: timestamp
Description: Time from which the license is active

Parameter: endTime
Type: timestamp
Description: Time at which the license stops being valid

Parameter: serial
Type: integer
Description: Serial

Parameter: licensee
Type: string
Description: Licensee

Parameter: nodeCount
Type: unsigned integer
Description: Nodes count with a MAC / cloud-identifier set

Parameter: burstNodeCount
Type: unsigned integer
Description: Bursted nodes count

Parameter: acceleratorNodeCount
Type: unsigned integer
Description: Nodes with one or more accelerators

Parameter: openStackNodeCount
Type: unsigned integer
Description: Nodes part of OpenStack

Parameter: accountingAndReporting
Type: boolean
Description: Accounting and reporting enabled/disabled

Parameter: edgeSites
Type: boolean

Description: Edge sites enabled/disabled

Parameter: message

Type: string

Description: License count message

Parameter: licenseType

Type: string

Description: License type

5.2.217 LiteMonitoredEntity : Entity

parent : Entity

Parameter: name

Type: string

Description: *none*

Parameter: types

Type: list of strings

Description: *none*

Parameter: resources

Type: list of strings

Description: *none*

Parameter: disabled

Type: boolean

Description: *none*

5.2.218 LiteMonitoringMeasurable : Entity

parent : Entity

Parameter: producer

Type: unsigned integer

Description: *none*

Parameter: name

Type: string

Description: *none*

Parameter: parameter

Type: string

Description: *none*

Parameter: kind

Type: string

Description: *none*

Parameter: disabled

Type: boolean

Description: *none*

Parameter: cumulative

Type: boolean

Description: *none*

5.2.219 LiteNode : Device

parent : Device

Parameter: ip

Type: IP

Description: Ip address

Parameter: network

Type: reference to Network or None

Description: Network to which this switch is connected

Parameter: additionalHostnames

Type: list of strings

Description: List of additional hostnames that should resolve to the interfaces IP address

5.2.220 LoginRole : Role

parent : Role

Parameter: shorewall

Type: boolean

Description: Manage shorewall

Parameter: openPorts

Type: list of OpenPort

Description: The list of ports that will be opened on the node's firewall

5.2.221 LogstashForwarderRole : Role

parent : Role

Parameter: servers

Type: list of strings

Description: List of hosts with logstash running

Parameter: sslCert

Type: string

Description: Path to the SSL certificate

Parameter: timeout

Type: unsigned integer

Description: Timeout

Parameter: syslogFiles

Type: list of strings

Description: List of syslog files to collect

Parameter: apacheFiles

Type: list of strings

Description: List of Apache files to collect

Parameter: customConfig

Type: string

Description: Custom config for logstash-forwarder

5.2.222 LogstashServerCustomFilter : LogstashServerFilter

parent : LogstashServerFilter

Parameter: customConfig

Type: string

Description: Use this field to override the whole config file

5.2.223 LogstashServerCustomListener : LogstashServerListener

parent : LogstashServerListener

Parameter: customConfig

Type: string

Description: Use this field to override the whole config file

5.2.224 LogstashServerCustomOutput : LogstashServerOutput

parent : LogstashServerOutput

Parameter: customConfig

Type: string

Description: Use this field to override the whole config file

5.2.225 LogstashServerElasticOutput : LogstashServerOutput

parent : LogstashServerOutput

Parameter: elasticHost

Type: string

Description: Host with elastic search. If not specified, a random host with elastic search will be found

Parameter: elasticCluster

Type: string

Description: Elastic search cluster name

5.2.226 LogstashServerFilter : Entity

parent : Entity

Parameter: name

Type: string

Description: *none*

5.2.227 LogstashServerListener : Entity

parent : Entity

Parameter: name

Type: string

Description: *none*

5.2.228 `LogstashServerLocalFileListener` : `LogstashServerListener`

parent : `LogstashServerListener`

Parameter: `localFilesToTrack`

Type: list of strings

Description: List of paths to local log files that should be tracked

Parameter: `localFilesType`

Type: string

Description: Type to append to local log files by logstash

5.2.229 `LogstashServerLumberjackListener` : `LogstashServerListener`

parent : `LogstashServerListener`

Parameter: `sslCert`

Type: string

Description: Path to the SSL certificate

Parameter: `sslKey`

Type: string

Description: Path to the SSL key

Parameter: `port`

Type: unsigned integer

Description: Port to listen for rsyslog

5.2.230 `LogstashServerOutput` : `Entity`

parent : `Entity`

Parameter: `name`

Type: string

Description: *none*

5.2.231 `LogstashServerRole` : `Role`

parent : `Role`

Parameter: `listeners`

Type: list of `LogstashServerListener`

Description: Logstash Listeners.

Parameter: `filters`

Type: list of `LogstashServerFilter`

Description: Logstash Filters.

Parameter: `output`

Type: list of `LogstashServerOutput`

Description: Logstash Outputs.

Parameter: `customConfig`

Type: string

Description: Use this field to override the whole config file.

5.2.232 `LogstashServerRSyslogFilter` : `LogstashServerFilter`**parent** : `LogstashServerFilter`**5.2.233** `LogstashServerRSyslogListener` : `LogstashServerListener`**parent** : `LogstashServerListener`**Parameter:** `sslCert`**Type:** `string`**Description:** Path to the SSL certificate**Parameter:** `sslKey`**Type:** `string`**Description:** Path to the SSL key**Parameter:** `port`**Type:** `unsigned integer`**Description:** Port to listen for rsyslog**5.2.234** `LogstashServerStdOutput` : `LogstashServerOutput`**parent** : `LogstashServerOutput`**Parameter:** `enableStdoutLog`**Type:** `boolean`**Description:** Write all the output to the logfile**Parameter:** `codec`**Type:** `string`**Description:** *none***5.2.235** `LSFBaseJobQueueStat` : `JobQueueStat`**parent** : `JobQueueStat`**Parameter:** `status`**Type:** `string`**Description:** Queue status**Parameter:** `priority`**Type:** `unsigned integer`**Description:** Queue priority**Parameter:** `njobs`**Type:** `unsigned integer`**Description:** Number of all jobs in queue**Parameter:** `pending`**Type:** `unsigned integer`**Description:** Number of pending jobs in queue**Parameter:** `running`**Type:** `unsigned integer`**Description:** Number of running jobs in queue

Parameter: `suspended`
Type: unsigned integer
Description: Number of suspended jobs in queue

5.2.236 LSFBaseJobQueue : JobQueue

parent : JobQueue
Parameter: `administrators`
Type: string
Description: List of queue administrators.

Parameter: `corelimit`
Type: unsigned integer
Description: The per-process core file size limit (in KB) for all of the processes belonging to a job from this queue.

Parameter: `cpulimit`
Type: string
Description: Maximum normalized CPU time and optionally, the default normalized CPU time allowed for all processes of a job running in this queue; value format: [default_limit] maximum_limit.

Parameter: `chkPnt`
Type: string
Description: Enables automatic checkpointing; value format: dir [period], where dir is the directory where the checkpoint files are created (do not use environment variables); period is the checkpoint period in minutes.

Parameter: `datalimit`
Type: unsigned integer
Description: The per-process data segment size limit (in KB) for all of the processes belonging to a job from this queue.

Parameter: `description`
Type: string
Description: Description of the queue that will be displayed by 'bqueues -l'

Parameter: `default_host_spec`
Type: string
Description: The default CPU time normalization host for the queue.

Parameter: `dispatch_window`
Type: string
Description: The time windows in which jobs from this queue are dispatched.

Parameter: `exclusive`
Type: string
Description: If Y, specifies an exclusive queue. Jobs submitted to an exclusive queue with 'bsub -x' will only be dispatched to a host that has no other LSF jobs running.

Parameter: filelimit

Type: unsigned integer

Description: The per-process file size limit (in KB) for all of the processes belonging to a job from this queue.

Parameter: hjob_limit

Type: unsigned integer

Description: Maximum number of job slots that this queue can use on any host.

Parameter: hosts

Type: string

Description: A space-separated list of hosts, host groups, and host partitions on which jobs from this queue can be run.

Parameter: ignore_deadline

Type: string

Description: If Y, disables deadline constraint scheduling (starts all jobs regardless of deadline constraints).

Parameter: interactive

Type: string

Description: Causes the queue to reject interactive batch jobs (NO) or accept nothing but interactive batch jobs (ONLY). Interactive batch jobs are submitted via 'bsub -I'.

Parameter: job_accept_interval

Type: unsigned integer

Description: The number of dispatch turns to wait after dispatching a job to a host, before dispatching a second job to the same host.

Parameter: job_controls

Type: string

Description: Changes the behaviour of the SUSPEND, RESUME, and TERMINATE actions.

Parameter: pre_post_exec_user

Type: string

Description: Username for prolog and epilog execution.

Parameter: prolog

Type: string

Description: Path to prolog script (pre_exec).

Parameter: epilog

Type: string

Description: Path to epilog script (post_exec).

Parameter: job_starter

Type: string

Description: Creates a specific environment for submitted jobs prior to execution.

Parameter: `load_index`

Type: string

Description: Scheduling and suspending thresholds for the specified dynamic load index.

Parameter: `memlimit`

Type: unsigned integer

Description: The per-process memory resident set size limit (in KB) for all of the processes belonging to a job from this queue.

Parameter: `mig`

Type: unsigned integer

Description: Enables automatic job migration and specifies the migration threshold, in minutes.

Parameter: `new_job_sched_delay`

Type: unsigned integer

Description: The maximum or minimum length of time that a new job waits before being dispatched; the behavior depends on whether the delay period specified is longer or shorter than a regular dispatch interval (`MBD_SLEEP_TIME` in `lsb.params`, 60 seconds by default).

Parameter: `nice`

Type: unsigned integer

Description: Adjusts the Unix scheduling priority at which jobs from this queue execute.

Parameter: `pjob_limit`

Type: unsigned integer

Description: The per-processor job slot limit for the queue.

Parameter: `processlimit`

Type: string

Description: Limits the number of concurrent processes that can be part of a job.

Parameter: `proclimit`

Type: string

Description: Limits the number of processors that can be allocated to the job.

Parameter: `priority`

Type: unsigned integer

Description: Queue priority.

Parameter: `qjob_limit`

Type: unsigned integer

Description: Job slot limit for the queue. Total number of job slots this queue can use.

Parameter: `rerunnable`

Type: string

Description: If yes, enables automatic job rerun (restart).

Parameter: `require_exit_values`

Type: string

Description: The exit codes that will cause the job to be requeued.

Parameter: `res_req`

Type: string

Description: Resource requirements used to determine eligible hosts.

Parameter: `resume_cond`

Type: string

Description: Use the select section of the resource requirement string to specify load thresholds. All other sections are ignored.

Parameter: `run_window`

Type: string

Description: Time period during which jobs in the queue are allowed to run.

Parameter: `runlimit`

Type: string

Description: The maximum run limit and optionally the default run limit. Value format: [default_limit] maximum_limit.

Parameter: `slot_reserve`

Type: unsigned integer

Description: Enables processor reservation and specifies the number of dispatch turns over which a parallel job can reserve job slots.

Parameter: `stacklimit`

Type: unsigned integer

Description: The per-process stack segment size limit (in KB) for all of the processes belonging to a job from this queue.

Parameter: `stop_cond`

Type: string

Description: Use the select section of the resource requirement string to specify load thresholds. All other sections are ignored.

Parameter: `swplimit`

Type: unsigned integer

Description: The amount of total virtual memory limit (in KB) for a job from this queue.

Parameter: `terminate_when`

Type: string

Description: Configures the queue to invoke the TERMINATE action instead of the SUSPEND action in the specified circumstance.

Parameter: `ujob_limit`

Type: unsigned integer

Description: The per-user job slot limit for the queue. Maximum number of slots that each user can use in this queue.

Parameter: `users`

Type: string

Description: A list of users or user groups that can submit jobs to this queue. Use the reserved word `all` to specify all users.

Parameter: `r15s`

Type: string

Description: Built-in load index: run queue length (15 sec average).

Parameter: `r1m`

Type: string

Description: Built-in load index: run queue length (1 min average).

Parameter: `r15m`

Type: string

Description: Built-in load index: run queue length (15 min average).

Parameter: `it`

Type: string

Description: Built-in load index: idle time.

Parameter: `io`

Type: string

Description: Built-in load index: disk I/O.

Parameter: `ut`

Type: string

Description: Built-in load index: CPU utilization.

Parameter: `mem`

Type: string

Description: Built-in load index: available memory (in MB).

Parameter: `pg`

Type: string

Description: Built-in load index: pages in + pages out.

Parameter: `tmp`

Type: string

Description: Built-in load index: available space in temporary file system (MB).

Parameter: `swp`

Type: string

Description: Built-in load index: available swap space (in MB).

Parameter: ls

Type: string

Description: Built-in load index.

5.2.237 LSFBaseJob : Job

parent : Job

5.2.238 LSFGroupsSettings : WlmCgroupsSettings

parent : WlmCgroupsSettings

Parameter: resourceEnforce

Type: list of strings

Description: Controls resource enforcement through the Linux cgroup memory and cpuset subsystem on Linux systems with cgroup support (LSB_RESOURCE_ENFORCE)

Parameter: processTracking

Type: boolean

Description: Enable this parameter to track processes based on job control functions such as termination, suspension, resume and other signaling, on Linux systems which support cgroups freezer subsystem (LSF_PROCESS_TRACKING)

Parameter: linuxCgroupAccounting

Type: boolean

Description: Enable this parameter to track processes based on CPU and memory accounting for Linux systems that support cgroup's memory and cpuacct subsystems (LSF_LINUX_CGROUP_ACCT)

Parameter: jobCgroupTemplate

Type: string

Description: Template for job cgroup path (\$CLUSTER will be replaced to LSF cluster name, \$JOBID will be replaced to job id)

5.2.239 LSFClientRole : LSFRole

parent : LSFRole

Parameter: slots

Type: string

Description: Number of slots available on this node/category

Parameter: queues

Type: list of references to LSFJobQueue

Description: Queues this node/nodes in this category belongs to

Parameter: allQueues

Type: boolean

Description: When set, the role will provide all available queues (the queues property will then be ignored)

Parameter: gpus

Type: unsigned integer

Description: Number of gpus

Parameter: gpuDevices

Type: list of strings

Description: /dev/* available to workload management

Parameter: server

Type: boolean

Description: Is LSF server (can run jobs)

Parameter: hostModel

Type: string

Description: Host model (possible values are defined in lsf.shared)

Parameter: hostType

Type: string

Description: Host type (possible values are defined in lsf.shared)

Parameter: nodeCustomizations

Type: list of WlmNodeCustomizationEntry

Description: LSF node custom properties

5.2.240 LSFJobQueueStat : LSFBaseJobQueueStat

parent : LSFBaseJobQueueStat

5.2.241 LSFJobQueue : LSFBaseJobQueue

parent : LSFBaseJobQueue

Parameter: fairshare

Type: string

Description: Fairshare scheduling

Parameter: backfill

Type: string

Description: Backfill scheduling

Parameter: preemption

Type: string

Description: Preemption scheduling

5.2.242 LSFJob : LSFBaseJob

parent : LSFBaseJob

5.2.243 LSFRole : Role

parent : Role

Parameter: wlmCluster

Type: reference to LSFWlmCluster

Description: WLM cluster link to this WLM role

5.2.244 LSFServerRole : LSFRole**parent** : LSFRole**Parameter:** externalServer**Type:** boolean**Description:** LSF server daemons are running on some external machine**5.2.245** LSFSubmitRole : Role**parent** : Role**Parameter:** lsfWlmClusters**Type:** list of references to LSFWlmCluster**Description:** List of LSF clusters which the role belongs to**5.2.246** LSFWlmCluster : WlmCluster**parent** : WlmCluster**Parameter:** version**Type:** string**Description:** Major LSF version**Parameter:** prefix**Type:** string**Description:** LSF installation directory**Parameter:** var**Type:** string**Description:** Var directory location**Parameter:** dynamicCloudNodes**Type:** boolean**Description:** Cloud nodes are added dynamically to LSF**Parameter:** placeholders**Type:** list of JobQueuePlaceholder**Description:** Job queue node placeholders mode**Parameter:** cgroups**Type:** LSFCgroupsSettings**Description:** Submode containing LSF related cgroups settings**5.2.247** MemcachedRole : Role**parent** : Role**Parameter:** includeInHAProxy**Type:** boolean**Description:** Automatically include the nodes with this role in HAProxy configuration.**Parameter:** frontendHAProxyNames**Type:** list of strings

Description: If set to a name of HAProxy, automatically configure the nodes having this role only behind that particular HAProxy.

Parameter: `isBackupEndpoint`

Type: `boolean`

Description: *none*

Parameter: `daemonize`

Type: `boolean`

Description: Run memcached as a daemon

Parameter: `port`

Type: `unsigned integer`

Description: Port to listen for the incoming connections

Parameter: `network`

Type: reference to `Network` or `None`

Description: Network to bind the socket to

Parameter: `bindToLocalInterfaceByDefault`

Type: `boolean`

Description: Used if network is not specified. If enabled, bind only to local interface, otherwise to all available interfaces

Parameter: `connections`

Type: `unsigned integer`

Description: Maximum simultaneous connections

Parameter: `logfile`

Type: `string`

Description: Path to store log file

Parameter: `logLevel`

Type: `unsigned integer`

Description: Log level (max level: 0, min level: 2)

Parameter: `initialMemoryCap`

Type: `unsigned integer`

Description: Memory cap on start

Parameter: `user`

Type: `string`

Description: User to run the memcached

Parameter: `lockMem`

Type: `boolean`

Description: Lock down all paged memory

Parameter: errorOnExhaust

Type: boolean

Description: Return error when memory is exhausted

Parameter: maxCoreFile

Type: boolean

Description: Maximize the core file size

Parameter: enableLogFile

Type: boolean

Description: Enable log file

Parameter: memGrowthFactor

Type: float

Description: Multiplier for memory growth

Parameter: minItemSize

Type: unsigned integer

Description: Allocate this minimum memory amount for the item key, value and flags

Parameter: disableCAS

Type: boolean

Description: Disable CAS

Parameter: threads

Type: unsigned integer

Description: Number of threads to process incoming connections

Parameter: useLargePages

Type: boolean

Description: Request large memory pages from OS

Parameter: otherOptions

Type: string

Description: Comma separated list of other options

5.2.248 MemoryInfo : Entity

parent : Entity

Parameter: location

Type: string

Description: Location

Parameter: speed

Type: string

Description: Speed

Parameter: size
Type: string
Description: Size

Parameter: type
Type: string
Description: Type

5.2.249 MonitoringActionRunData : Entity

parent : Entity
Parameter: target
Type: unsigned integer
Description: Target node

Parameter: info
Type: string
Description: Extra information

Parameter: env
Type: list of strings
Description: Environment

5.2.250 MonitoringAction : Entity

parent : Entity
Parameter: name
Type: string
Description: Name

Parameter: runOn
Type: enum
Description: Run the action on

Parameter: allowedTime
Type: string
Description: Sets time interval during which action is allowed to be executed

Parameter: disable
Type: boolean
Description: Disable

Parameter: suppressedByGoingDown
Type: boolean
Description: Suppress running action if device is going down

5.2.251 MonitoringCacheSubSystemInfo : Entity

parent : Entity
Parameter: name
Type: string

Description: Name

Parameter: queued

Type: unsigned integer

Description: Number of samples ready for delivery

Parameter: pickup

Type: unsigned integer

Description: Number of times data has been picked up

Parameter: delivered

Type: unsigned integer

Description: Number of samples delivered the last pick up

Parameter: handled

Type: unsigned integer

Description: Total number of samples handled

5.2.252 `MonitoringCategoryListExecutionFilter` : `MonitoringExecutionFilter`

parent : `MonitoringExecutionFilter`

Parameter: categories

Type: list of references to `Category`

Description: List of categories belonging to this group

5.2.253 `MonitoringCategoryListExecutionMultiplexer` : `MonitoringExecutionMultiplexer`

parent : `MonitoringExecutionMultiplexer`

Parameter: categories

Type: list of references to `Category`

Description: List of categories belonging to this group

5.2.254 `MonitoringCompareExpression` : `MonitoringExpression`

parent : `MonitoringExpression`

Parameter: entities

Type: string

Description: Entities matching the regex, leave empty for all

Parameter: measurables

Type: string

Description: Measurables matching the regex, leave empty for all

Parameter: parameters

Type: string

Description: Parameters matching the regex, leave empty for all

Parameter: op

Type: enum

Description: Operator

Parameter: grouping

Type: enum

Description: Method to group all matching entity measurable parameter

Parameter: value

Type: string

Description: Value

Parameter: useRaw

Type: boolean

Description: Use raw data instead of rate for cumulative metrics

Parameter: code

Type: string

Description: Lua code

5.2.255 MonitoringConsolidator : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: disabled

Type: boolean

Description: Disable, consolidator for all entities. Do not throw away existing data.

Parameter: consolidators

Type: list of Consolidator

Description: Consolidators

5.2.256 MonitoringDataCacheSubSystemInfo : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: size

Type: unsigned integer

Description: First plot request

Parameter: updates

Type: unsigned integer

Description: Last plot request

Parameter: requests

Type: unsigned integer

Description: Number of plot requests

5.2.257 `MonitoringDataProducerAggregateNode` : `MonitoringDataProducerInternal`

parent : `MonitoringDataProducerInternal`

Parameter: `maxSampleAge`

Type: float

Description: Maximal age of node sample to contribute

Parameter: `excludeNodes`

Type: list of references to `Node`

Description: List of nodes to exclude from the total

Parameter: `excludeCategories`

Type: list of references to `Category`

Description: List of node groups to exclude from the total

Parameter: `excludeNodeGroups`

Type: list of references to `NodeGroup`

Description: List of node groups to exclude from the total

5.2.258 `MonitoringDataProducerAggregatePDU` : `MonitoringDataProducerInternal`

parent : `MonitoringDataProducerInternal`

Parameter: `maxSampleAge`

Type: float

Description: Maximal age of node sample to contribute

Parameter: `excludePDUs`

Type: list of references to `PowerDistributionUnit`

Description: List of PDUs to exclude from the total

5.2.259 `MonitoringDataProducerAlertLevel` : `MonitoringDataProducerInternal`

parent : `MonitoringDataProducerInternal`

5.2.260 `MonitoringDataProducerClusterTotal` : `MonitoringDataProducerInternal`

parent : `MonitoringDataProducerInternal`

5.2.261 `MonitoringDataProducerCMDaemonState` : `MonitoringDataProducerInternal`

parent : `MonitoringDataProducerInternal`

Parameter: `subsystems`

Type: list of strings

Description: Subsystems

5.2.262 `MonitoringDataProducerDeviceState` : `MonitoringDataProducerInternal`

parent : `MonitoringDataProducerInternal`

5.2.263 `MonitoringDataProducerEC2SpotPrices` : `MonitoringDataProducerInternal`

parent : `MonitoringDataProducerInternal`

5.2.264 `MonitoringDataProducerEthernetSwitch` : `MonitoringDataProducerInternal`

parent : `MonitoringDataProducerInternal`

5.2.265 `MonitoringDataProducerFuture` : `MonitoringDataProducerInternal`

parent : `MonitoringDataProducerInternal`

Parameter: `implements`

Type: enum

Description: Implements functionality

5.2.266 `MonitoringDataProducerGalera` : `MonitoringDataProducer`

parent : `MonitoringDataProducer`

5.2.267 `MonitoringDataProducerGenerator` : `MonitoringDataProducerInternal`

parent : `MonitoringDataProducerInternal`

Parameter: `generators`

Type: list of strings

Description: Genenators to define

5.2.268 `MonitoringDataProducerGPU` : `MonitoringDataProducer`

parent : `MonitoringDataProducer`

Parameter: `updateFreq`

Type: float

Description: How often to update data

5.2.269 `MonitoringDataProducerInternal` : `MonitoringDataProducer`

parent : `MonitoringDataProducer`

5.2.270 `MonitoringDataProducerJobMetadata` : `MonitoringDataProducer`

parent : `MonitoringDataProducer`

Parameter: `allowPreAllocate`

Type: boolean

Description: Allow pre-allocate of monitoring structures, speeds up for large number of jobs. Disable if measurables per node differ a lot

Parameter: `excludeMetrics`

Type: list of strings

Description: Exclude metrics by name from collection

Parameter: `includeMetrics`

Type: list of strings

Description: Only these metrics will be samples if the set is not empty

Parameter: `excludeUsers`

Type: list of strings

Description: Exclude usage data for the specified users

Parameter: `includeUsers`

Type: list of strings

Description: Only include usage data for the specified users

Parameter: `minimalUserId`

Type: unsigned integer

Description: Minumal user ID

Parameter: `userCode`

Type: string

Description: Lua code for calculation of extra metric per user

5.2.271 `MonitoringDataProducerJobQueue` : `MonitoringDataProducer`

parent : `MonitoringDataProducer`

Parameter: `wlmClusters`

Type: list of references to `WlmCluster`

Description: List of wlm clusters for which to sample, empty for all

5.2.272 `MonitoringDataProducerJob` : `MonitoringDataProducer`

parent : `MonitoringDataProducer`

Parameter: `allowPreAllocate`

Type: boolean

Description: Allow pre-allocate of monitoring structures, speeds up for large number of jobs. Disable if measurables per node differ a lot

Parameter: `metricSettings`

Type: `MonitoringJobMetricSettings`

Description: Submode containing job metric settings

5.2.273 `MonitoringDataProducerLua` : `MonitoringDataProducer`

parent : `MonitoringDataProducer`

Parameter: `code`

Type: string

Description: Lua code

Parameter: `timeout`

Type: unsigned integer

Description: Lua timeout

5.2.274 `MonitoringDataProducerMonitoringSystem` : `MonitoringDataProducerInternal`

parent : `MonitoringDataProducerInternal`

5.2.275 `MonitoringDataProducerOpenStackHealth` : `MonitoringDataProducer`

parent : `MonitoringDataProducer`

5.2.276 `MonitoringDataProducerOpenStack` : `MonitoringDataProducer`

parent : `MonitoringDataProducer`

5.2.277 `MonitoringDataProducerPerpetual` : `MonitoringDataProducer`

parent : `MonitoringDataProducer`

Parameter: `script`

Type: string

Description: Script

Parameter: `runInBash`

Type: boolean

Description: Run the script in a bash session

Parameter: `arguments`

Type: list of strings

Description: Additional arguments to pass to the script

Parameter: format

Type: enum

Description: Expected output format

Parameter: watch

Type: boolean

Description: Watch script for for changes, and restart

5.2.278 [MonitoringDataProducerPowerDistributionUnit](#) :
[MonitoringDataProducerInternal](#)

parent : [MonitoringDataProducerInternal](#)

5.2.279 [MonitoringDataProducerProcMemInfo](#) : [MonitoringDataProducerInternal](#)

parent : [MonitoringDataProducerInternal](#)

5.2.280 [MonitoringDataProducerProcMount](#) : [MonitoringDataProducerInternal](#)

parent : [MonitoringDataProducerInternal](#)

Parameter: includeMedia

Type: boolean

Description: Include media mount points

Parameter: includeRemote

Type: boolean

Description: Include remote mount points

Parameter: includeDocker

Type: boolean

Description: Include docker mount points

Parameter: excludeMountPoints

Type: list of strings

Description: Exclude mount points

5.2.281 [MonitoringDataProducerProcNetDev](#) : [MonitoringDataProducerInternal](#)

parent : [MonitoringDataProducerInternal](#)

Parameter: excludeIf

Type: list of strings

Description: Exclude interfaces

5.2.282 [MonitoringDataProducerProcNetSnmp](#) : [MonitoringDataProducerInternal](#)

parent : [MonitoringDataProducerInternal](#)

5.2.283 [MonitoringDataProducerProcPidStat](#) : [MonitoringDataProducerInternal](#)

parent : [MonitoringDataProducerInternal](#)

Parameter: pid

Type: unsigned integer

Description: PID to sample

Parameter: process

Type: string

Description: Process

5.2.284 `MonitoringDataProducerProcStat` : `MonitoringDataProducerInternal`**parent** : `MonitoringDataProducerInternal`**Parameter**: `individualCPU`**Type**: `boolean`**Description**: Measure individual CPUs**5.2.285** `MonitoringDataProducerProcVMStat` : `MonitoringDataProducerInternal`**parent** : `MonitoringDataProducerInternal`**5.2.286** `MonitoringDataProducerPrometheus` : `MonitoringDataProducer`**parent** : `MonitoringDataProducer`**Parameter**: `urls`**Type**: list of strings**Description**: One or more URLs to try connect to**Parameter**: `timeout`**Type**: unsigned integer**Description**: Http get timeout**Parameter**: `passEnvironment`**Type**: `boolean`**Description**: Pass the entity environment to the script**Parameter**: `username`**Type**: `string`**Description**: Username used in http call**Parameter**: `password`**Type**: `string`**Description**: Password used in http call**Parameter**: `https`**Type**: `boolean`**Description**: `https`**Parameter**: `caPath`**Type**: `string`**Description**: CA certificate path**Parameter**: `privateKeyPath`**Type**: `string`**Description**: Certificate path**Parameter**: `certificatePath`**Type**: `string`**Description**: Private key path**Parameter**: `staleTracking`

Type: boolean

Description: Enable automatic tracking of stale metrics

Parameter: includeProducerJobName

Type: boolean

Description: Automatically include producer job name in Prometheus label

Parameter: includeEntityName

Type: boolean

Description: Automatically include entity name in Prometheus label

Parameter: rules

Type: list of PrometheusRecordingRule

Description: Recording rules

5.2.287 MonitoringDataProducerRackSensor : MonitoringDataProducerInternal

parent : MonitoringDataProducerInternal

5.2.288 MonitoringDataProducerRecorder : MonitoringDataProducer

parent : MonitoringDataProducer

Parameter: query

Type: reference to PrometheusQuery or None

Description: Query to execute

Parameter: freeQuery

Type: string

Description: Free string query to execute

Parameter: evaluationTime

Type: string

Description: Evaluation time

Parameter: stalenessDelay

Type: float

Description: Staleness delay

Parameter: excludeBright

Type: boolean

Description: Exclude Bright data

Parameter: excludePrometheus

Type: boolean

Description: Exclude Prometheus data

Parameter: inputRules

Type: list of PrometheusRecordingRule

Description: Input recording rules

Parameter: rules

Type: list of PrometheusRecordingRule

Description: Recording rules

5.2.289 MonitoringDataProducerScript : MonitoringDataProducer

parent : MonitoringDataProducer

Parameter: script

Type: string

Description: Script

Parameter: timeout

Type: unsigned integer

Description: Script timeout

Parameter: arguments

Type: list of strings

Description: Additional arguments to pass to the script

Parameter: format

Type: enum

Description: Expected output format

5.2.290 MonitoringDataProducerSingleLineHealthCheckScript : MonitoringDataProducerSingleLineScript

parent : MonitoringDataProducerSingleLineScript

5.2.291 MonitoringDataProducerSingleLineMetricScript : MonitoringDataProducerSingleLineScript

parent : MonitoringDataProducerSingleLineScript

Parameter: minimum

Type: float

Description: Minimum

Parameter: maximum

Type: float

Description: Maximum

Parameter: cumulative

Type: boolean

Description: Cumulative

Parameter: unit

Type: string

Description: Unit

5.2.292 MonitoringDataProducerSingleLineScript : MonitoringDataProducer

parent : MonitoringDataProducer

Parameter: script

Type: string

Description: Script

Parameter: typeClass

Type: string

Description: Type class, slash(/) separated for levels

Parameter: timeout

Type: unsigned integer

Description: Script timeout

Parameter: arguments

Type: list of strings

Description: Additional arguments to pass to the script

Parameter: runInBash

Type: boolean

Description: Run the script in a bash session

5.2.293 MonitoringDataProducerSysBlockStat : MonitoringDataProducerInternal

parent : MonitoringDataProducerInternal

Parameter: excludeVirtualDisks

Type: boolean

Description: Exclude virtual disks

Parameter: excludeDisks

Type: list of strings

Description: Exclude disks

5.2.294 MonitoringDataProducerSysInfo : MonitoringDataProducerInternal

parent : MonitoringDataProducerInternal

5.2.295 MonitoringDataProducerTest : MonitoringDataProducerInternal

parent : MonitoringDataProducerInternal

Parameter: instances

Type: unsigned integer

Description: Number of instances per test

5.2.296 MonitoringDataProducer : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: description

Type: string

Description: Description

Parameter: notes

Type: string

Description: Administrator notes

Parameter: when

Type: enum

Description: When the producer should run

Parameter: maxAge

Type: float

Description: Maximal age of historic data, 0 for infinite

Parameter: maxSamples

Type: unsigned integer

Description: Maximal samples of historic data, 0 for infinite

Parameter: interval

Type: float

Description: Sampling interval

Parameter: offset

Type: float

Description: Time offset for sampling interval

Parameter: startupDelay

Type: float

Description: Delay the first sampling the specified time after cmd starts

Parameter: intervals

Type: list of floating point numbers

Description: Out of band sampling interval

Parameter: gap

Type: unsigned integer

Description: Number of missed samples before we add a NaN

Parameter: fuzzyOffset

Type: float

Description: Automatic fuzzy offset factor [0-1]. Multiplied by interval

Parameter: introduceNaN

Type: boolean

Description: Introduce NaN if device goes up/down/up

Parameter: automaticReinitialize

Type: boolean

Description: Automatic run -initialize when a new metric has been detected

Parameter: disabled

Type: boolean

Description: Disabled

Parameter: disableOnHighLoad

Type: boolean

Description: Disable when nodes are very busy

Parameter: nodeExecutionFilters

Type: list of MonitoringExecutionFilter

Description: Filter nodes which should run this data producer. If none are specified: execute on each node.

Parameter: executionMultiplexers

Type: list of MonitoringExecutionMultiplexer

Description: Execute the producer once for each entity which matches one of the criteria. If none are specified: only execute it for the node itself.

Parameter: consolidator

Type: reference to MonitoringConsolidator or None

Description: Consolidator configuration

Parameter: suppressedByGoingDown

Type: boolean

Description: Suppress running action if device is going down

Parameter: associatedUser

Type: string

Description: User associated with this measurable

5.2.297 MonitoringDataProducerTrustedTool : MonitoringDataProducer

parent : MonitoringDataProducer

Parameter: port

Type: unsigned integer

Description: Port

Parameter: localhost

Type: boolean

Description: Only listen on localhost

Parameter: secret

Type: string

Description: Secret

5.2.298 MonitoringDataProducerUserCount : MonitoringDataProducerInternal

parent : MonitoringDataProducerInternal

Parameter: customScript

Type: string

Description: Custom script

Parameter: customScriptTimeout

Type: unsigned integer

Description: Custom script timeout

Parameter: minimalUserId

Type: unsigned integer

Description: Minimal user ID

Parameter: namesInInfoMessage

Type: boolean

Description: Names in info message, could lead to lots of data

5.2.299 MonitoringDeviceStateSubSystemInfo : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: up

Type: unsigned integer

Description: Number of up devices

Parameter: down

Type: unsigned integer

Description: Number of down devices

Parameter: closed

Type: unsigned integer

Description: Number of closed devices

Parameter: muted

Type: unsigned integer

Description: Number of muted devices

5.2.300 MonitoringDrainAction : MonitoringAction

parent : MonitoringAction

5.2.301 MonitoringEmailAction : MonitoringAction

parent : MonitoringAction

Parameter: recipients

Type: list of strings

Description: Recipients

Parameter: allAdministrators

Type: boolean

Description: Also send e-mail to all administrator

Parameter: server

Type: string

Description: The SNMP server

Parameter: sender

Type: string

Description: The sender of the e-mail

Parameter: info

Type: string

Description: Extra information passed in the e-mail

Parameter: timeout

Type: unsigned integer

Description: Timeout

Parameter: mergeDelay

Type: float

Description: Maximal action delay in order to merge with others

Parameter: mergeTrigger

Type: boolean

Description: Merge action from multiple triggers into one

Parameter: mergeMeasurable

Type: boolean

Description: Merge action from multiple measurables into one

5.2.302 MonitoringEventAction : MonitoringAction

parent : MonitoringAction

Parameter: profiles

Type: list of strings

Description: Inform all sessions with the specified profile, none is all

Parameter: userNames

Type: list of strings

Description: Inform all sessions with the specified user names, none is all

Parameter: mergeDelay

Type: float

Description: Maximal action delay in order to merge with others

5.2.303 MonitoringExecutionFilter : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: filterOperation

Type: enum

Description: The filter operation to be performed

5.2.304 MonitoringExecutionMultiplexer : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: filterOperation

Type: enum

Description: The filter operation to be performed

5.2.305 MonitoringExpression : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

5.2.306 MonitoringGroupedExpression : MonitoringExpression

parent : MonitoringExpression

Parameter: op

Type: enum

Description: Operator

Parameter: allowMissing

Type: boolean

Description: Allow missing sub expressions

Parameter: expressions

Type: list of MonitoringCompareExpression

Description: Expressions

5.2.307 MonitoringHealthOverview : Entity

parent : Entity

Parameter: refEntityUniqueKey

Type: unsigned integer

Description: Entity

Parameter: alertLevelMaximum

Type: unsigned integer

Description: Maximal severity of all failed triggers

Parameter: alertLevelSum

Type: unsigned integer

Description: Total severity of all failed triggers

Parameter: alertLevelCount
Type: unsigned integer
Description: Total count of all failed triggers

Parameter: timestamp
Type: unsigned integer
Description: Timestamp of data

Parameter: info
Type: string
Description: Info

5.2.308 MonitoringImageUpdateAction : MonitoringAction

parent : MonitoringAction

5.2.309 MonitoringJobMetricSettings : Entity

parent : Entity

Parameter: excludeDevices
Type: list of strings
Description: Exclude block devices from metric collection (by default all the devices are sampled)

Parameter: includeDevices
Type: list of strings
Description: Only these devices will be sampled if the set is not empty

Parameter: enableAdvancedMetrics
Type: boolean
Description: Sample advanced metrics as well as basic metrics

Parameter: noGpusIsAllGpus
Type: boolean
Description: Include data from all GPUs even if the job has no GPUs defined

Parameter: excludeMetrics
Type: list of strings
Description: Exclude metrics by name from collection

Parameter: includeMetrics
Type: list of strings
Description: Only these metrics will be samples if the set is not empty

Parameter: cgroupBaseDirectory
Type: string
Description: CGroup base directory

Parameter: cgroupSearch
Type: string

Description: Search field for finding the WLM CGroup

Parameter: `keepAliveSleep`

Type: `float`

Description: Time the cgroup keepalive process sleeps

Parameter: `samplingType`

Type: `enum`

Description: Type of metrics sampling

Parameter: `pickupInterval`

Type: `float`

Description: High initial pickup interval

Parameter: `pickupTimes`

Type: `unsigned integer`

Description: Number of times to apply the high initial pickup interval

Parameter: `pickupPriority`

Type: `unsigned integer`

Description: Priority of the pickup interval change

5.2.310 `MonitoringLuaExecutionFilter` : `MonitoringExecutionFilter`

parent : `MonitoringExecutionFilter`

Parameter: `code`

Type: `string`

Description: Lua code

Parameter: `notes`

Type: `string`

Description: Notes

5.2.311 `MonitoringLuaExecutionMultiplexer` : `MonitoringExecutionMultiplexer`

parent : `MonitoringExecutionMultiplexer`

Parameter: `code`

Type: `string`

Description: Lua code

Parameter: `notes`

Type: `string`

Description: Notes

5.2.312 `MonitoringMeasurableEnum` : `MonitoringMeasurable`

parent : `MonitoringMeasurable`

5.2.313 `MonitoringMeasurableHealthCheck` : `MonitoringMeasurable`

parent : `MonitoringMeasurable`

5.2.314 `MonitoringMeasurableMetric` : `MonitoringMeasurable`

parent : `MonitoringMeasurable`

Parameter: `minimum`

Type: float
Description: Minimum

Parameter: maximum
Type: float
Description: Maximum

Parameter: cumulative
Type: boolean
Description: Cumulative

Parameter: unit
Type: string
Description: Unit

5.2.315 MonitoringMeasurable : Entity

parent : Entity
Parameter: producer
Type: reference to MonitoringDataProducer
Description: Monitoring data producer

Parameter: name
Type: string
Description: Name

Parameter: parameter
Type: string
Description: Parameter

Parameter: maxAge
Type: float
Description: Maximal age of historic data, 0 for infinite

Parameter: maxSamples
Type: unsigned integer
Description: Maximal samples of historic data, 0 for infinite

Parameter: disabled
Type: boolean
Description: Disable: do not process or save to disk

Parameter: gap
Type: unsigned integer
Description: Number of missed samples before we add a NaN

Parameter: introduceNaN
Type: boolean

Description: Introduce NaN if device goes up/down/up

Parameter: description

Type: string

Description: Description

Parameter: typeClass

Type: string

Description: Type class, slash(/) separated for levels

Parameter: sourceType

Type: enum

Description: Source of the measurable

Parameter: consolidator

Type: reference to MonitoringConsolidator or None

Description: Consolidator configuration

Parameter: suppressedByGoingDown

Type: boolean

Description: Suppress running action if device is going down

Parameter: access

Type: enum

Description: User access control

Parameter: associatedUser

Type: string

Description: User associated with this measurable

5.2.316 MonitoringNodeListExecutionFilter : MonitoringExecutionFilter

parent : MonitoringExecutionFilter

Parameter: nodes

Type: list of references to Node

Description: List of nodes belonging to this group

5.2.317 MonitoringNodeListExecutionMultiplexer : MonitoringExecutionMultiplexer

parent : MonitoringExecutionMultiplexer

Parameter: nodes

Type: list of references to Node

Description: List of nodes belonging to this group

5.2.318 MonitoringOverlayListExecutionFilter : MonitoringExecutionFilter

parent : MonitoringExecutionFilter

Parameter: overlays

Type: list of references to ConfigurationOverlay

Description: List of overlays belonging to this group

5.2.319 `MonitoringOverlayListExecutionMultiplexer` : `MonitoringExecutionMultiplexer`

parent : `MonitoringExecutionMultiplexer`

Parameter: `overlays`

Type: list of references to `ConfigurationOverlay`

Description: List of overlays belonging to this group

5.2.320 `MonitoringPickupInterval` : `Entity`

parent : `Entity`

Parameter: `refNodeUniqueKey`

Type: unsigned integer

Description: `Node`

Parameter: `interval`

Type: float

Description: Interval on which the RPC will be done

Parameter: `times`

Type: unsigned integer

Description: Number of times the RPC will be done with the interval

Parameter: `priority`

Type: unsigned integer

Description: Priority of the current pickup interval

5.2.321 `MonitoringPlotterSubSystemInfo` : `Entity`

parent : `Entity`

Parameter: `name`

Type: string

Description: Name

Parameter: `first`

Type: unsigned integer

Description: First plot request

Parameter: `last`

Type: unsigned integer

Description: Last plot request

Parameter: `count`

Type: unsigned integer

Description: Number of plot requests

Parameter: `samples`

Type: unsigned integer

Description: Number of data samples

Parameter: `sources`

Type: unsigned integer

Description: Number of sources

5.2.322 `MonitoringPowerAction` : `MonitoringAction`

parent : `MonitoringAction`

5.2.323 `MonitoringPowerOffAction` : `MonitoringPowerAction`

parent : `MonitoringPowerAction`

5.2.324 `MonitoringPowerOnAction` : `MonitoringPowerAction`

parent : `MonitoringPowerAction`

5.2.325 `MonitoringPowerResetAction` : `MonitoringPowerAction`

parent : `MonitoringPowerAction`

5.2.326 `MonitoringRebootAction` : `MonitoringAction`

parent : `MonitoringAction`

5.2.327 `MonitoringReplicateConfiguration` : `Entity`

parent : `Entity`

Parameter: `node`

Type: unsigned integer

Description: Node

Parameter: `sources`

Type: list of `MonitoringReplicateSource`

Description: Sources

5.2.328 `MonitoringReplicateSource` : `Entity`

parent : `Entity`

Parameter: `source`

Type: unsigned integer

Description: Source

Parameter: `target`

Type: unsigned integer

Description: Target

Parameter: `last`

Type: unsigned integer

Description: Last

Parameter: `lastSummary`

Type: unsigned integer

Description: Last summary

Parameter: `active`

Type: boolean

Description: Active

Parameter: `queue`

Type: unsigned integer

Description: Queue

Parameter: entities

Type: list of unsigned numbers

Description: Entities

Parameter: measurables

Type: list of unsigned numbers

Description: Measurables

5.2.329 MonitoringReplicateSubSystemInfo : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: first

Type: unsigned integer

Description: First request time

Parameter: last

Type: unsigned integer

Description: Last request time

Parameter: count

Type: unsigned integer

Description: Request count

Parameter: samples

Type: unsigned integer

Description: Total number of samples send

Parameter: sources

Type: list of unsigned numbers

Description: Data request sources

5.2.330 MonitoringResourceExecutionFilter : MonitoringExecutionFilter

parent : MonitoringExecutionFilter

Parameter: resources

Type: list of strings

Description: Resources

Parameter: op

Type: enum

Description: Operator

5.2.331 `MonitoringResourceExecutionMultiplexer` : `MonitoringExecutionMultiplexer`**parent** : `MonitoringExecutionMultiplexer`**Parameter:** `resources`**Type:** list of strings**Description:** Resources**Parameter:** `op`**Type:** enum**Description:** Operator**5.2.332** `MonitoringRole` : `Role`**parent** : `Role`**5.2.333** `MonitoringScriptAction` : `MonitoringAction`**parent** : `MonitoringAction`**Parameter:** `script`**Type:** string**Description:** Script**Parameter:** `arguments`**Type:** list of strings**Description:** Arguments**Parameter:** `timeout`**Type:** unsigned integer**Description:** Timeout**Parameter:** `nodeEnvironment`**Type:** boolean**Description:** Pass the node environment to the script**Parameter:** `runInShell`**Type:** boolean**Description:** Run in shell**Parameter:** `mergeDelay`**Type:** float**Description:** Maximal action delay in order to merge with others**Parameter:** `mergeTrigger`**Type:** boolean**Description:** Merge action from multiple triggers into one**Parameter:** `mergeMeasurable`**Type:** boolean**Description:** Merge action from multiple measurables into one

5.2.334 `MonitoringServiceAction : MonitoringAction`**parent** : MonitoringAction**Parameter:** service**Type:** string**Description:** Service**Parameter:** arguments**Type:** list of strings**Description:** Arguments**5.2.335** `MonitoringServiceRestartAction : MonitoringServiceAction`**parent** : MonitoringServiceAction**5.2.336** `MonitoringServiceStartAction : MonitoringServiceAction`**parent** : MonitoringServiceAction**5.2.337** `MonitoringServiceStopAction : MonitoringServiceAction`**parent** : MonitoringServiceAction**5.2.338** `MonitoringServiceSubSystemInfo : Entity`**parent** : Entity**Parameter:** name**Type:** string**Description:** Name**Parameter:** stopped**Type:** boolean**Description:** Stopped**Parameter:** suspended**Type:** boolean**Description:** Suspended**Parameter:** last**Type:** unsigned integer**Description:** Last sample time**Parameter:** queued**Type:** unsigned integer**Description:** Queued items**Parameter:** handled**Type:** unsigned integer**Description:** Handled items**Parameter:** cacheMiss**Type:** unsigned integer**Description:** Miss cached count

5.2.339 MonitoringShutdownAction : MonitoringAction**parent** : MonitoringAction**5.2.340** MonitoringStorageSubSystemInfo : Entity**parent** : Entity**Parameter:** name**Type:** string**Description:** Name**Parameter:** elements**Type:** unsigned integer**Description:** Elements**Parameter:** disksize**Type:** unsigned integer**Description:** Disk size**Parameter:** freespace**Type:** unsigned integer**Description:** Free disk space**Parameter:** usage**Type:** float**Description:** Usage**5.2.341** MonitoringSubSystemInfo : SubSystemInfo**parent** : SubSystemInfo**Parameter:** storage**Type:** list of MonitoringStorageSubSystemInfo**Description:** Storage**Parameter:** service**Type:** list of MonitoringServiceSubSystemInfo**Description:** Service**Parameter:** plotter**Type:** list of MonitoringPlotterSubSystemInfo**Description:** Plotter**Parameter:** dataCache**Type:** list of MonitoringDataCacheSubSystemInfo**Description:** DataCache**Parameter:** cache**Type:** list of MonitoringCacheSubSystemInfo**Description:** Cache**Parameter:** replicate

Type: list of MonitoringReplicateSubSystemInfo

Description: Replicate

Parameter: deviceState

Type: list of MonitoringDeviceStateSubSystemInfo

Description: DeviceState

5.2.342 MonitoringTrigger : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: disabled

Type: boolean

Description: Disable

Parameter: severity

Type: unsigned integer

Description: Severity

Parameter: markEntityAsFailed

Type: boolean

Description: Mark entity as failed

Parameter: markEntityAsUnknown

Type: boolean

Description: Mark entity as unknown

Parameter: stateFlappingPeriod

Type: float

Description: Time period to check for state flapping

Parameter: stateFlappingCount

Type: unsigned integer

Description: Number of times states need to change in the specified period before it is considered stateflapping

Parameter: expression

Type: MonitoringExpression

Description: Expression

Parameter: enterActions

Type: list of references to MonitoringAction

Description: Actions to execute when the expression enters 'true' state

Parameter: duringActions

Type: list of references to `MonitoringAction`

Description: Actions to execute when the expression is and has been 'true'

Parameter: `leaveActions`

Type: list of references to `MonitoringAction`

Description: Actions to execute when the expression is was 'true' and no longer is

Parameter: `stateFlappingActions`

Type: list of references to `MonitoringAction`

Description: Actions to execute when the expression is state flapping

5.2.343 `MonitoringTypeExecutionFilter : MonitoringExecutionFilter`

parent : `MonitoringExecutionFilter`

Parameter: `headNode`

Type: boolean

Description: Head node

Parameter: `physicalNode`

Type: boolean

Description: Physical node

Parameter: `cloudNode`

Type: boolean

Description: Cloud node

Parameter: `virtualNode`

Type: boolean

Description: Virtual node

Parameter: `virtualSMPNode`

Type: boolean

Description: Virtual SMP node

Parameter: `liteNode`

Type: boolean

Description: Lite node

5.2.344 `MonitoringTypeExecutionMultiplexer : MonitoringExecutionMultiplexer`

parent : `MonitoringExecutionMultiplexer`

Parameter: `types`

Type: list of strings

Description: Types

5.2.345 `MonitoringUndrainAction : MonitoringAction`

parent : `MonitoringAction`

5.2.346 `MsgQueue : Entity`

parent : `Entity`

Parameter: `refNodeUniqueKey`

Type: unsigned integer

Description: Node

Parameter: msqid

Type: integer

Description: Message queue ID

Parameter: ipcperm

Type: IPCPerm

Description: IPC permissions

Parameter: size

Type: unsigned integer

Description: Size in bytes

Parameter: qnum

Type: unsigned integer

Description: Number of messages in the queue

5.2.347 MyrinetSwitch : Switch

parent : Switch

5.2.348 NetworkAliasInterface : NetworkInterface

parent : NetworkInterface

5.2.349 NetworkBmcInterface : NetworkInterface

parent : NetworkInterface

Parameter: gateway

Type: IP

Description: Gateway IP address, usually the head node's IP on the BMC network.

Parameter: vlanid

Type: unsigned integer

Description: VLAN ID setting for the BMC card. When set to 0, VLAN capabilities are disabled.

Parameter: lanchannel

Type: unsigned integer

Description: LAN channel for BMC interface

5.2.350 NetworkBondInterface : NetworkInterface

parent : NetworkInterface

Parameter: mode

Type: integer

Description: Bonding mode, see bonding.txt in the kernel documentation.

Parameter: options

Type: string

Description: Options to pass to the bonding driver, see kernel documentation.

Parameter: interfaces

Type: list of strings

Description: List of interfaces which should be channel-bonded.

5.2.351 NetworkBridgeInterface : NetworkInterface

parent : NetworkInterface

Parameter: stp

Type: boolean

Description: Spanning Tree Protocol enabled.

Parameter: forward_delay

Type: unsigned integer

Description: Frame forward delay (in seconds)

Parameter: interfaces

Type: list of strings

Description: List of interfaces which should be bridged.

5.2.352 NetworkConnection : Entity

parent : Entity

Parameter: refNodeUniqueKey

Type: unsigned integer

Description: Node

Parameter: source

Type: IP

Description: The source IP address

Parameter: sourcePort

Type: unsigned integer

Description: The source port

Parameter: destination

Type: IP

Description: The destination IP address

Parameter: destinationPort

Type: unsigned integer

Description: The destination port

Parameter: type

Type: enum

Description: The connection type

Parameter: state

Type: enum

Description: The connection state

5.2.353 `NetworkInterface` : Entity

parent : Entity

Parameter: name

Type: string

Description: The network interface device name

Parameter: ip

Type: IP

Description: The interfaces IP address

Parameter: ipv6Ip

Type: IP

Description: The interfaces IPv6 IP address

Parameter: dhcp

Type: boolean

Description: Get the ip via DHCP, leave ip blank

Parameter: ipv6Dhcp

Type: boolean

Description: Get the IPv6IP via DHCP, leave IPv6IP blank

Parameter: bringupduringinstall

Type: enum

Description: Brings up interface during install if on

Parameter: network

Type: reference to Network or None

Description: Network the interface is connected to

Parameter: additionalHostnames

Type: list of strings

Description: List of additional hostnames that should resolve to the interfaces IP address

Parameter: startIf

Type: enum

Description: Only run this service in the specified state

Parameter: onNetworkPriority

Type: unsigned integer

Description: Priority of DNS resolution queries for the interface on its network

Parameter: connectedMode

Type: boolean

Description: IB connected mode

5.2.354 NetworkNetMapInterface : NetworkInterface**parent** : NetworkInterface**5.2.355** NetworkPhysicalInterface : NetworkInterface**parent** : NetworkInterface**Parameter:** mac**Type:** MAC**Description:** The interfaces MAC address**Parameter:** speed**Type:** string**Description:** The interfaces network speed.**Parameter:** cardtype**Type:** string**Description:** The type of network interface.**5.2.356** Network : Entity**parent** : Entity**Parameter:** name**Type:** string**Description:** Name**Parameter:** IPv6**Type:** boolean**Description:** IPv6 enabled**Parameter:** ipv6NetmaskBits**Type:** unsigned integer**Description:** Netmask or Classless Inter-Domain Routing for IPv6**Parameter:** netmaskBits**Type:** unsigned integer**Description:** Netmask or Classless Inter-Domain Routing**Parameter:** ipv6BaseAddress**Type:** IP**Description:** Base IP address for Ipv6**Parameter:** baseAddress**Type:** IP**Description:** Base IP address**Parameter:** broadcastAddress**Type:** IP**Description:** Broadcast IP address**Parameter:** domainName

Type: string

Description: Domain name

Parameter: type

Type: enum

Description: Type of network, internal: local cluster network, external: connection to outside world, global: unique network accros the cloud, tunnel: cloud network, netmap: virtual network user by cloud nodes to connect to nodes inside the cluster

Parameter: mtu

Type: unsigned integer

Description: The maximum transmission unit.

Parameter: bootable

Type: boolean

Description: If set compute nodes can boot using this network

Parameter: dynamicRangeStart

Type: IP

Description: First IP address in the networks dynamic range

Parameter: dynamicRangeEnd

Type: IP

Description: Last IP address in the networks dynamic range

Parameter: lockDownDhcpd

Type: boolean

Description: Don't respond to dhcp request of new nodes via this network

Parameter: management

Type: boolean

Description: If set, the network can be used as a management network

Parameter: gateway

Type: IP

Description: Gateway

Parameter: ipv6Gateway

Type: IP

Description: IPv6 Gateway

Parameter: notes

Type: string

Description: Administrator notes

Parameter: openStackType

Type: enum

Description: *none*

Parameter: openStackDNSFormat

Type: string

Description: DNS entry format for instances with floating ip assigned

Parameter: openStackIsShared

Type: boolean

Description: *none*

Parameter: openStackAllocationPoolStart

Type: IP

Description: *none*

Parameter: openStackAllocationPoolEnd

Type: IP

Description: *none*

Parameter: openStackVlanRange

Type: string

Description: *none*

Parameter: openStackVlanID

Type: integer

Description: *none*

Parameter: openStackHostNetwork

Type: reference to Network or None

Description: *none*

Parameter: openStackPhysicalNetwork

Type: string

Description: *none*

Parameter: openStackExtraField

Type: list of strings

Description: extra field2

Parameter: cloudSubnetID

Type: string

Description: The Cloud ID of the subnet

Parameter: EC2AvailabilityZone

Type: string

Description: The AWS availability zone inside which the subnet exists

Parameter: EC2String

Type: string

Description: *none*

Parameter: allowAutosign

Type: enum

Description: Specify if certificate request from node installers can be signed automatically

Parameter: generateDNSZone

Type: enum

Description: Specify which DNS zones should be written

Parameter: excludeFromSearchDomain

Type: boolean

Description: Exclude from search domain in /etc/resolv.conf file

Parameter: searchDomainIndex

Type: unsigned integer

Description: Search domain index in /etc/resolv.conf file, set to 0 for automatic

Parameter: disableAutomaticExports

Type: boolean

Description: Disable creation of automatic filesystem exports

5.2.357 NetworkTunnelInterface : NetworkInterface

parent : NetworkInterface

5.2.358 NetworkVLANInterface : NetworkInterface

parent : NetworkInterface

Parameter: reorder_hdr

Type: boolean

Description: When set to true the VLAN device will move the ethernet header around to make it look exactly like a real ethernet device.

5.2.359 NewNode : Entity

parent : Entity

Parameter: switchPort

Type: SwitchPort or None

Description: Switch port the new node is connected to.

Parameter: mac

Type: MAC

Description: MAC address of the new node.

Parameter: firstSeen

Type: integer

Description: Uptime when the new node was first seen.

Parameter: lastSeen

Type: integer

Description: Uptime when the new node was last seen.

Parameter: appeared

Type: string

Description: Timestamp when the new node first appeared.

5.2.360 NginxRole : Role

parent : Role

5.2.361 NodeGroup : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: nodes

Type: list of references to Node

Description: List of nodes belonging to this group

Parameter: type

Type: enum

Description: Node group type

5.2.362 NodeHierarchyResult : Entity

parent : Entity

Parameter: responsibility

Type: enum

Description: Responsibility

Parameter: nodes

Type: list of unsigned numbers

Description: Node

Parameter: rules

Type: list of unsigned numbers

Description: Rules from which nodes were derived

Parameter: responsible

Type: list of unsigned numbers

Description: List of nodes that are responsible for the node

5.2.363 NodeHierarchyRuleCategorySelection : NodeHierarchyRuleSelection

parent : NodeHierarchyRuleSelection

Parameter: categories

Type: list of references to Category

Description: List of categories

5.2.364 NodeHierarchyRuleCloudRegionSelection : NodeHierarchyRuleSelection

parent : NodeHierarchyRuleSelection

Parameter: regions

Type: list of references to CloudRegion

Description: List of regions

5.2.365 NodeHierarchyRuleDeviceSelection : NodeHierarchyRuleSelection

parent : NodeHierarchyRuleSelection

Parameter: devices

Type: list of references to Device

Description: List of devices

5.2.366 NodeHierarchyRuleEdgeSiteSelection : NodeHierarchyRuleSelection

parent : NodeHierarchyRuleSelection

Parameter: edgesites

Type: list of references to EdgeSite

Description: List of edgesites

5.2.367 NodeHierarchyRuleNodeGroupSelection : NodeHierarchyRuleSelection

parent : NodeHierarchyRuleSelection

Parameter: nodegroups

Type: list of references to NodeGroup

Description: List of nodegroups

5.2.368 NodeHierarchyRuleNodeSelection : NodeHierarchyRuleSelection

parent : NodeHierarchyRuleSelection

Parameter: nodes

Type: list of references to Node

Description: List of nodes

5.2.369 NodeHierarchyRuleRackSelection : NodeHierarchyRuleSelection

parent : NodeHierarchyRuleSelection

Parameter: racks

Type: list of references to Rack

Description: List of racks

5.2.370 NodeHierarchyRuleRoleSelection : NodeHierarchyRuleSelection

parent : NodeHierarchyRuleSelection

Parameter: director

Type: boolean

Description: Director

Parameter: boot

Type: boolean

Description: Boot

Parameter: provisioning

Type: boolean

Description: Provisioning

Parameter: dns

Type: boolean

Description: DNS

Parameter: ldap

Type: boolean

Description: LDAP

5.2.371 NodeHierarchyRuleSelection : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: operation

Type: enum

Description: Operation

5.2.372 NodeHierarchyRule : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: description

Type: string

Description: description

Parameter: disabled

Type: boolean

Description: Disabled

Parameter: priority

Type: unsigned integer

Description: Priority

Parameter: allowSelf

Type: boolean

Description: Allow node to serve itself

Parameter: locationMatch

Type: boolean

Description: Source and target node locations need to match

Parameter: sources

Type: list of NodeHierarchyRuleSelection

Description: Source selection

Parameter: targets

Type: list of NodeHierarchyRuleSelection

Description: Target selection

Parameter: director

Type: boolean

Description: Director

Parameter: dhcp

Type: boolean

Description: DHCP

Parameter: dns

Type: boolean

Description: DNS

Parameter: ntp

Type: boolean

Description: NTP

Parameter: vpn

Type: boolean

Description: VPN

Parameter: ldap

Type: boolean

Description: LDAP

Parameter: provisioning

Type: boolean

Description: Provisioning

Parameter: mount

Type: boolean

Description: Mount

Parameter: sshProxy

Type: boolean

Description: SSH proxy

Parameter: cmdaemonConfiguration

Type: boolean

Description: Configuration

Parameter: cmdaemonRpcForward

Type: boolean

Description: RPC forward

Parameter: cmdaemonEvents

Type: boolean

Description: Events

Parameter: cmdaemonStatus

Type: boolean

Description: Status

Parameter: cmdaemonWebSocket

Type: boolean

Description: Web socket for lite nodes

Parameter: monitoringCollectCache

Type: boolean

Description: Monitoring collect

Parameter: monitoringRemoteSample

Type: boolean

Description: Monitoring sample

Parameter: distribution

Type: enum

Description: Distribution

5.2.373 NodeHierarchyRuleTypeSelection : NodeHierarchyRuleSelection

parent : NodeHierarchyRuleSelection

Parameter: headNode

Type: boolean

Description: Head node

Parameter: physicalNode

Type: boolean

Description: Physical node

Parameter: cloudNode

Type: boolean

Description: Cloud node

Parameter: virtualNode

Type: boolean

Description: Virtual node

Parameter: liteNode

Type: boolean

Description: Lite node

Parameter: ethernetSwitch

Type: boolean

Description: Ethernet switch

Parameter: `ibSwitch`

Type: boolean

Description: IB switch

Parameter: `rackSensor`

Type: boolean

Description: Rack sensor

Parameter: `powerDistributionUnit`

Type: boolean

Description: Power distribution unit

Parameter: `genericDevice`

Type: boolean

Description: Power distribution unit

Parameter: `chassis`

Type: boolean

Description: Chassis

5.2.374 Node : Device

parent : Device

Parameter: `cmdaemonUrl`

Type: string

Description: *none*

Parameter: `interfaces`

Type: list of NetworkInterface

Description: Ip on the management network

Parameter: `provisioningInterface`

Type: element of interfaces

Description: Network interface on which the node will receive software image updates

Parameter: `fsmounts`

Type: list of FSMount

Description: Configure the entries placed in `/etc/fstab`

Parameter: `fsexports`

Type: list of FSExport

Description: Configure the entries placed in `/etc/exports`

Parameter: `staticRoutes`

Type: list of StaticRoute

Description: Configure static routes for the interfaces

Parameter: roles

Type: list of Role

Description: Assign the roles the node should play

Parameter: services

Type: list of OSServiceConfig

Description: Manage operating system services

Parameter: pxelabel

Type: string

Description: PXE Label to be displayed when this node boots

Parameter: customRemoteConsoleScript

Type: string

Description: Script that will be used to remote console a device

Parameter: customRemoteConsoleScriptArgument

Type: string

Description: Argument for the custom remote console script

Parameter: provisioningTransport

Type: enum

Description: Defines what transport protocol should be used for provisioning. Options are RSYNC-SSH or RSYNCDAEMON. The latter is the default, is a bit less secure but faster.

Parameter: gpuSettings

Type: list of GPUSettings

Description: Configure the GPUs

Parameter: ucsInfoConfigured

Type: UCSInfo or None

Description: Configure UCS Settings

Parameter: dellSettings

Type: DellSettings or None

Description: Dell Settings

Parameter: excludeListManipulateScript

Type: string

Description: A user defined script that can be used to do custom last minute changes to the exclude lists used by cmdaemon to rsync

Parameter: ioScheduler

Type: string

Description: The I/O scheduler for the disks

Parameter: useExclusivelyFor

Type: string

Description: Use node exclusively for desired function: stop all other services

Parameter: bmcSettings

Type: BMCSettings or None

Description: Configure the baseboard management controller settings

Parameter: proxySettings

Type: ProxySettings or None

Description: Configure the proxy server settings

Parameter: versionConfigFiles

Type: boolean

Description: Keep old versions of all config files for this node

5.2.375 NvidiaGPUSettings : GPUSettings

parent : GPUSettings

Parameter: powerLimit

Type: string

Description: An upper limit on how much power a GPU can use

Parameter: eccMode

Type: string

Description: Set the ECC mode in which the GPU runs

Parameter: computeMode

Type: string

Description: Set the compute mode in which the GPU runs

Parameter: clockSyncBoostMode

Type: string

Description: Set the clock sync boost among the GPUs in group

Parameter: clockSpeeds

Type: string

Description: Set the streaming multiprocessor/memory clock speed of the GPU

5.2.376 OpenPort : Entity

parent : Entity

Parameter: port

Type: unsigned integer

Description: Port

Parameter: protocol

Type: enum

Description: Protocol

Parameter: address

Type: CIDR

Description: *none*

5.2.377 OpenStackApiAgent : OpenStackApiEntity

parent : OpenStackApiEntity

Parameter: serviceType

Type: string

Description: The type of the service, e.g. compute, networking.

Parameter: binary

Type: string

Description: The name of the binary/process representing the agent.

Parameter: host

Type: string

Description: The host running the service.

Parameter: currentState

Type: string

Description: The current state of the agent.

Parameter: lastSeen

Type: string

Description: The last time this agent reported itself to be alive.

Parameter: availabilityZone

Type: string

Description: In which AZ this agent is located (not applicable to all agents).

Parameter: status

Type: string

Description: The status of the service.

Parameter: extra

Type: string

Description: Additional information about the service.

5.2.378 OpenStackApiDomain : OpenStackApiEntity

parent : OpenStackApiEntity

Parameter: enabled

Type: boolean

Description: Whether the domain is enabled in OpenStack.

Parameter: description

Type: string

Description: Human-readable description of the domain.

5.2.379 `OpenStackApiEndpoint : OpenStackApiEntity`

parent : `OpenStackApiEntity`

Parameter: `serviceUUID`

Type: `string`

Description: Service

Parameter: `interface`

Type: `enum`

Description: Type of endpoint

Parameter: `url`

Type: `string`

Description: URL of the endpoint

Parameter: `region`

Type: `string`

Description: Region of the endpoint

Parameter: `enabled`

Type: `boolean`

Description: Can be used by the user to disable endpoint

Parameter: `brightManaged`

Type: `boolean`

Description: *none*

Parameter: `brightManagedInfo`

Type: `string`

Description: *none*

5.2.380 `OpenStackApiEntity : Entity`

parent : `Entity`

Parameter: `name`

Type: `string`

Description: The name of this OpenStack object.

Parameter: `UUID`

Type: `string`

Description: The unique identifier of the object.

Parameter: `ownerUniqueKey`

Type: `unsigned integer`

Description: *none*

Parameter: `addedFromBright`

Type: `boolean`

Description: Whether or not the object was created via Bright APIs (e.g. with CMSH), as opposed to being created directly in OpenStack (e.g. with OpenStack dashboard).

Parameter: `addedTimestamp`

Type: timestamp

Description: The time when the object was first created within CMDaemon. The creation might have happened either directly via Bright's API (e.g. via cmsH), or by the object being discovered by CMDaemon in OpenStack).

Parameter: `lastUpdateFromOpenStackTimestamp`

Type: timestamp

Description: The last time some changes in the object were pulled from OpenStack to be stored in CMDaemon.

Parameter: `lastUpdateFromBrightTimestamp`

Type: timestamp

Description: The last time this object was modified via Bright APIs (as opposed to being modified directly in OpenStack).

5.2.381 `OpenStackApiFlavor : OpenStackApiEntity`

parent : `OpenStackApiEntity`

Parameter: `disk`

Type: unsigned integer

Description: Size of the root disk of a VM. This is the disk which will contain the image/volumes used as the source. This block device is managed by Nova.

Parameter: `ephemeral`

Type: unsigned integer

Description: Size of the ephemeral disk of a VM. Optional. This block device is managed by Nova.

Parameter: `swap`

Type: unsigned integer

Description: Size of the swap disk of a VM. This block device is managed by Nova.

Parameter: `vcpus`

Type: unsigned integer

Description: Number of virtual CPUs a VM will have

Parameter: `ram`

Type: unsigned integer

Description: The amount of system memory (RAM) the VM will have

Parameter: `rxTxFactor`

Type: float

Description: Receive/transmit factor

Parameter: `isPublic`

Type: boolean

Description: Whether the flavor will be visible to everyone

Parameter: enabled

Type: boolean

Description: Whether the flavor is enabled

Parameter: extraSpecs

Type: string

Description: A dictionary containing custom extra specifications for the flavor

Parameter: deleted

Type: boolean

Description: Whether this flavor has been marked as deleted in Nova

Parameter: projectUUIDs

Type: list of strings

Description: The list of projects which have access to this Flavor

5.2.382 `OpenStackApiFloatingIP : OpenStackApiEntity`

parent : `OpenStackApiEntity`

Parameter: portUUID

Type: string

Description: The OpenStack port associated with this floating IP.

Parameter: routerUUID

Type: string

Description: The OpenStack router associated with this floating IP.

Parameter: projectUUID

Type: string

Description: The OpenStack project which owns this floating IP.

Parameter: floatingNetworkUUID

Type: string

Description: The OpenStack network which provided this IP.

Parameter: floatingIPAddress

Type: string

Description: The floating IP address.

Parameter: fixedIPAddress

Type: string

Description: The fixed IP address.

5.2.383 `OpenStackApiGroup : OpenStackApiEntity`

parent : `OpenStackApiEntity`

Parameter: description

Type: string

Description: String describing the API group

Parameter: domainUUID

Type: string

Description: The OpenStack domain which owns this OpenStack group

5.2.384 OpenStackApiHostAggregate : OpenStackApiEntity

parent : OpenStackApiEntity

Parameter: originalID

Type: unsigned integer

Description: Host aggregates default to having integers as 'UUID', to work around this limitation, Bright stores a custom-created string as the UUID of the host aggregate. This field contains the original ID of the host aggregate, as visible in OpenStack.

Parameter: hosts

Type: list of strings

Description: Names of hosts in this aggregate

Parameter: availabilityZone

Type: string

Description: If this host aggregate is to define a nova availability nova, define the name of that zone here.

Parameter: deleted

Type: boolean

Description: *none*

Parameter: metadata

Type: string

Description: A JSON containing the metadata associated with the host aggregate.

Parameter: updateFromRoles

Type: boolean

Description: *none*

Parameter: nodes

Type: list of references to ComputeNode

Description: Nodes in this aggregate

5.2.385 OpenStackApiHypervisor : OpenStackApiEntity

parent : OpenStackApiEntity

Parameter: type

Type: string

Description: The type of the hypervisor.

Parameter: freeDisk

Type: unsigned integer

Description: Free disk space available.

Parameter: freeRam

Type: unsigned integer

Description: Free RAM available.

Parameter: localStorage

Type: unsigned integer

Description: Total size of local storage.

Parameter: localStorageUsed

Type: unsigned integer

Description: Amount of local storage being used.

Parameter: memory

Type: unsigned integer

Description: Amount of RAM

Parameter: memoryUsed

Type: unsigned integer

Description: Amount of RAM being used.

Parameter: runningVMs

Type: unsigned integer

Description: Number of VMs running on the host.

Parameter: vcpus

Type: unsigned integer

Description: Number of VCPUs available in this host (this number does not include overallocation).

Parameter: vcpusUsed

Type: unsigned integer

Description: Number of VCPUs being used.

Parameter: currentWorkload

Type: unsigned integer

Description: Current workload, as reported by OpenStack.

Parameter: status

Type: string

Description: Current status of the hypervisor.

Parameter: state

Type: string

Description: Current state (UP/DOWN) of the hypervisor.

Parameter: ip

Type: IP

Description: IP address of the hypervisor.

Parameter: cpuInfo

Type: string

Description: CPU information.

5.2.386 OpenStackApiImage : OpenStackApiEntity

parent : OpenStackApiEntity

Parameter: projectUUID

Type: string

Description: The OpenStack project which owns the image.

Parameter: containerFormat

Type: string

Description: Container format of the image file.

Parameter: diskFormat

Type: string

Description: Disk format of the image.

Parameter: createdAt

Type: string

Description: When the image was added to OpenStack.

Parameter: updatedAt

Type: string

Description: When the image was last updated in OpenStack.

Parameter: visibility

Type: string

Description: Visibility status of the image.

Parameter: isProtected

Type: boolean

Description: Whether the image is protected from accidental removal. Protected images cannot be removed.

Parameter: minDisk

Type: unsigned integer

Description: Minimum amount of root disk space a flavor has to provide in order to be able to run this image.

Parameter: minRam

Type: unsigned integer

Description: Minimum amount of RAM a flavor has to provide in order to be able to run this image.

Parameter: file

Type: string

Description: Name of the image file.

Parameter: size

Type: unsigned integer

Description: Size of the image file.

Parameter: tags

Type: list of strings

Description: Image tags applied to the image. OpenStack allows to e.g. list images based on certain tags.

Parameter: propertyArchitecture

Type: string

Description: Optional property.

Parameter: propertyHypervisorType

Type: string

Description: Optional property.

Parameter: propertyInstanceUUID

Type: string

Description: Optional property.

Parameter: propertyImgConfigDrive

Type: string

Description: Optional property.

Parameter: propertyKernelID

Type: string

Description: Optional property.

Parameter: propertyOSDistro

Type: string

Description: Optional property.

Parameter: propertyOSVersion

Type: string

Description: Optional property.

Parameter: propertyRamdiskID

Type: string

Description: Optional property.

Parameter: propertyVMMode

Type: string

Description: Optional property.

Parameter: `propertyHWDiskBus`

Type: string

Description: Optional libvirt-specific property.

Parameter: `propertyHWRngModel`

Type: string

Description: Optional libvirt-specific property.

Parameter: `propertyHWMachineType`

Type: string

Description: Optional libvirt-specific property.

Parameter: `propertyHWSCSIModel`

Type: string

Description: Optional libvirt-specific property.

Parameter: `propertyHWSerialPortCount`

Type: unsigned integer

Description: Optional libvirt-specific property.

Parameter: `propertyHWVideoModel`

Type: string

Description: Optional libvirt-specific property.

Parameter: `propertyHWVideoRam`

Type: unsigned integer

Description: Optional libvirt-specific property.

Parameter: `propertyOSCommandLine`

Type: string

Description: Optional libvirt-specific property.

Parameter: `propertyHWVifModel`

Type: string

Description: Optional libvirt-specific property.

Parameter: `propertyOSType`

Type: string

Description: Optional property.

Parameter: `propertyAutoDiskConfig`

Type: string

Description: Optional property.

5.2.387 `OpenStackApiNetwork : OpenStackApiEntity`**parent :** `OpenStackApiEntity`**Parameter:** `projectUUID`**Type:** `string`**Description:** OpenStack project owning this network.**Parameter:** `subnetUUIDs`**Type:** `list of strings`**Description:** OpenStack subnets contained in this Network.**Parameter:** `status`**Type:** `string`**Description:** Operational status of the network.**Parameter:** `providerNetworkType`**Type:** `string`**Description:** Provider network type.**Parameter:** `providerPhysicalNetwork`**Type:** `string`**Description:** Name of the underlying provider network.**Parameter:** `providerSegmentationID`**Type:** `integer`**Description:** Segmentation ID (e.g. VLAN or VXLAN ID).**Parameter:** `routerExternal`**Type:** `boolean`**Description:** Whether or not the network is to be considered as an external network.**Parameter:** `shared`**Type:** `boolean`**Description:** Whether everyone can see this network and create ports on it.**Parameter:** `adminStateUp`**Type:** `boolean`**Description:** Administrative state of the network.**Parameter:** `MTU`**Type:** `unsigned integer`**Description:** Maximum transfer unit on layer-2.**5.2.388** `OpenStackApiPort : OpenStackApiEntity`**parent :** `OpenStackApiEntity`**Parameter:** `macAddress`**Type:** `string`

Description: The (layer-2) MAC address of the port.

Parameter: status

Type: string

Description: Current status of the port.

Parameter: adminStateUp

Type: boolean

Description: Administrative state of the port.

Parameter: deviceOwner

Type: string

Description: Device which owns the port.

Parameter: projectUUID

Type: string

Description: The OpenStack project which owns the port.

Parameter: deviceUUID

Type: string

Description: The OpenStack Device which owns the port.

Parameter: networkUUID

Type: string

Description: The OpenStack network on which the port is located.

Parameter: securityGroupUUIDs

Type: list of strings

Description: Security groups applied to the port.

Parameter: bindingHostUUID

Type: string

Description: Binding host.

Parameter: bindingVifType

Type: string

Description: Binding vif type.

Parameter: bindingVnicType

Type: string

Description: Binding vnic type.

Parameter: ips

Type: list of OsapiPortIP

Description: IP addresses active on the port

5.2.389 `OpenStackApiProject` : `OpenStackApiEntity`

parent : `OpenStackApiEntity`

Parameter: `description`

Type: `string`

Description: The custom description of the project.

Parameter: `enabled`

Type: `boolean`

Description: Whether or not the project is enabled and can be used by users.

Parameter: `domainUUID`

Type: `string`

Description: The OpenStack domain which owns this project. Domains are top-level projects.

Parameter: `parentProjectUUID`

Type: `string`

Description: The parent OpenStack project.

Parameter: `brightManaged`

Type: `boolean`

Description: Whether the project was created from within Bright APIs.

Parameter: `internal`

Type: `boolean`

Description: Whether the project is designated for internal use by OpenStack.

Parameter: `removed`

Type: `boolean`

Description: Whether the project has been marked as removed from OpenStack.

Parameter: `removeTime`

Type: `timestamp`

Description: The time at which the project has been removed.

Parameter: `motd`

Type: `string`

Description: Message of the day.

Parameter: `quotaInstances`

Type: `unsigned integer`

Description: The maximum number of object of this type which can be owned simultaneously by the project.

Parameter: `quotaVCPU`s

Type: `unsigned integer`

Description: The maximum number of object of this type which can be owned simultaneously by the project.

Parameter: quotaRam

Type: unsigned integer

Description: The maximum number of object of this type which can be owned simultaneously by the project.

Parameter: quotaInjectedFiles

Type: unsigned integer

Description: The maximum number of object of this type which can be owned simultaneously by the project.

Parameter: quotaInjectedFileContent

Type: unsigned integer

Description: The maximum number of object of this type which can be owned simultaneously by the project.

Parameter: quotaVolumes

Type: unsigned integer

Description: The maximum number of object of this type which can be owned simultaneously by the project.

Parameter: quotaVolumeSnapshots

Type: unsigned integer

Description: The maximum number of object of this type which can be owned simultaneously by the project.

Parameter: quotaTotalSizeOfVolumesAndSnapshots

Type: unsigned integer

Description: The maximum number of object of this type which can be owned simultaneously by the project.

Parameter: quotaSecurityGroups

Type: unsigned integer

Description: The maximum number of object of this type which can be owned simultaneously by the project.

Parameter: quotaSecurityGroupRules

Type: unsigned integer

Description: The maximum number of object of this type which can be owned simultaneously by the project.

Parameter: quotaFloatingIPs

Type: unsigned integer

Description: The maximum number of object of this type which can be owned simultaneously by the project.

Parameter: quotaNetworks

Type: unsigned integer

Description: The maximum number of object of this type which can be owned simultaneously by the project.

Parameter: quotaPorts

Type: unsigned integer

Description: The maximum number of object of this type which can be owned simultaneously by the project.

Parameter: quotaSubnets

Type: unsigned integer

Description: The maximum number of object of this type which can be owned simultaneously by the project.

Parameter: quotaRouters

Type: unsigned integer

Description: The maximum number of object of this type which can be owned simultaneously by the project.

5.2.390 `OpenStackApiRoleAssignment` : `OpenStackApiEntity`

parent : `OpenStackApiEntity`

Parameter: projectUUID

Type: string

Description: The role needs to be assigned within either a Project or to a Domain (which, in keystone, internally are top-level projects).

Parameter: domainUUID

Type: string

Description: The role needs to be assigned within either a Project or to a Domain (which, in keystone, internally are top-level projects).

Parameter: userUUID

Type: string

Description: The role (within a Project or Domain) needs to be assigned to either a OpenStack User or a OpenStack user group.

Parameter: groupUUID

Type: string

Description: The role (within a Project or Domain) needs to be assigned to either a OpenStack User or a OpenStack user group.

Parameter: roleUUID

Type: string

Description: This UUID does not really exists in OpenStack. Role assignment are one of the few OpenStack objects which does not have a real UUID.

5.2.391 `OpenStackApiRole` : `OpenStackApiEntity`

parent : `OpenStackApiEntity`

Parameter: domainUUID

Type: string

Description: *none*

5.2.392 `OpenStackApiRouter : OpenStackApiEntity`

parent : `OpenStackApiEntity`

Parameter: `status`

Type: `string`

Description: Current status of the router

Parameter: `adminStateUp`

Type: `boolean`

Description: Administrative state of the router (can be used to bring the router down temporarily)

Parameter: `projectUUID`

Type: `string`

Description: Project owning the router

Parameter: `externalGatewayNetworkUUID`

Type: `string`

Description: OpenStack network object which is this router's external network

Parameter: `externalGatewayEnableSNAT`

Type: `boolean`

Description: Whether or not this router should have SNAT enabled

Parameter: `host`

Type: `string`

Description: Network node hosting the router

Parameter: `ha`

Type: `tri-boolean`

Description: Whether that's a Highly Available router

5.2.393 `OpenStackApiSecurityGroup : OpenStackApiEntity`

parent : `OpenStackApiEntity`

Parameter: `description`

Type: `string`

Description: The description.

Parameter: `projectUUID`

Type: `string`

Description: The OpenStack project which owns this security group.

Parameter: `rules`

Type: `list of OsapiSecurityGroupRule`

Description: The set of OpenStack security group rules which compose this security group.

5.2.394 `OpenStackApiServer : OpenStackApiEntity`**parent** : `OpenStackApiEntity`**Parameter:** `projectUUID`**Type:** `string`**Description:** OpenStack project which owns this server.**Parameter:** `userUUID`**Type:** `string`**Description:** OpenStack user which owns this server.**Parameter:** `hostUUID`**Type:** `string`**Description:** OpenStack host which hosts this server.**Parameter:** `flavorUUID`**Type:** `string`**Description:** OpenStack flavor used for this server.**Parameter:** `imageUUID`**Type:** `string`**Description:** OpenStack image used for this server.**Parameter:** `status`**Type:** `string`**Description:** Current status of the server.**Parameter:** `vmState`**Type:** `string`**Description:** Current status of the VM.**Parameter:** `createdAt`**Type:** `string`**Description:** The date when the server was first created.**Parameter:** `updatedAt`**Type:** `string`**Description:** Last update date.**Parameter:** `launchedAt`**Type:** `string`**Description:** The last time this server was started.**Parameter:** `host`**Type:** `string`**Description:** Name of the host, which hosts the server.**Parameter:** `hypervisorHostname`

Type: string

Description: Hypervisor name.

Parameter: instanceName

Type: string

Description: The name of the VM instance which represents this server.

Parameter: availabilityZone

Type: string

Description: The name of availability zone in which the server is located.

Parameter: faultCreatedAt

Type: string

Description: The time the fault status was created.

Parameter: faultDetails

Type: string

Description: Details of the fault.

Parameter: faultMessage

Type: string

Description: The error message.

Parameter: defaultHost

Type: reference to ComputeNode

Description: Default host for this instance

Parameter: securityGroupUUIDs

Type: list of strings

Description: OpenStack security groups associated with this server.

5.2.395 `OpenStackApiService` : `OpenStackApiEntity`

parent : `OpenStackApiEntity`

Parameter: description

Type: string

Description: The description of the service

Parameter: enabled

Type: boolean

Description: Whether or not the service is enabled

Parameter: type

Type: string

Description: The type of the service

5.2.396 `OpenStackApiStack` : `OpenStackApiEntity`

parent : `OpenStackApiEntity`

Parameter: projectUUID

Type: string
Description: Reserved for future use.

Parameter: createdAt
Type: string
Description: Reserved for future use.

Parameter: updatedAt
Type: string
Description: Reserved for future use.

Parameter: status
Type: string
Description: Reserved for future use.

Parameter: statusReason
Type: string
Description: Reserved for future use.

Parameter: theParent
Type: string
Description: Reserved for future use.

Parameter: owner
Type: string
Description: Reserved for future use.

Parameter: description
Type: string
Description: Reserved for future use.

Parameter: templateDescription
Type: string
Description: Reserved for future use.

Parameter: resources
Type: list of OsapiStackResource
Description: Reserved for future use.

5.2.397 OpenStackApiSubnet : OpenStackApiEntity

parent : OpenStackApiEntity

Parameter: enableDHCP

Type: boolean

Description: Determines whether OpenStack should run DHCP server on this subnet.

Parameter: networkUUID

Type: string

Description: The OpenStack network which contains the subnet.

Parameter: projectUUID

Type: string

Description: The OpenStack project which owns the subnet.

Parameter: DNSNameservers

Type: list of strings

Description: DNS name servers advertised by the DHCP server on this subnet.

Parameter: IPVersion

Type: enum

Description: IP Protocol version.

Parameter: CIDR

Type: string

Description: The CIDR defining the subnet, for example: 10.42.0.0/16.

Parameter: allocationPools

Type: list of OsapiSubnetAllocationPool

Description: List of IP ranges used for dynamically assigned IPs on this subnet (via DHCP). For external networks, this defines the floating IP range.

Parameter: gatewayIP

Type: IP

Description: IP of the gateway for this network.

5.2.398 `OpenStackApiUser` : `OpenStackApiEntity`

parent : `OpenStackApiEntity`

Parameter: description

Type: string

Description: The description.

Parameter: email

Type: string

Description: Email address of the user.

Parameter: domainUUID

Type: string

Description: The domain which owns this user.

Parameter: defaultProjectUUID

Type: string

Description: The default project of this user. User should have a role within this project.

Parameter: password

Type: string

Description: The password of this user.

Parameter: enabled

Type: boolean

Description: Whether the user is active and can log in.

Parameter: groupUUIDs

Type: list of strings

Description: OpenStack groups this user is part of.

5.2.399 `OpenStackApiVolumeSnapshot : OpenStackApiEntity`

parent : `OpenStackApiEntity`

Parameter: description

Type: string

Description: The description of the volume snapshot.

Parameter: status

Type: string

Description: Current status of the snapshot.

Parameter: createdAt

Type: string

Description: When has the volume snapshot been created.

Parameter: size

Type: unsigned integer

Description: The total size of the snapshot.

Parameter: volumeUUID

Type: string

Description: A OpenStack volume related to this volume snapshot.

Parameter: projectUUID

Type: string

Description: The OpenStack project which owns this volume snapshot.

5.2.400 `OpenStackApiVolume : OpenStackApiEntity`

parent : `OpenStackApiEntity`

Parameter: description

Type: string

Description: The description

Parameter: availabilityZone

Type: string

Description: The availability zone where the volume is stored.

Parameter: status

Type: string

Description: The current status of the volume

Parameter: `createdAt`

Type: `string`

Description: When the volume was created by Cinder.

Parameter: `size`

Type: `unsigned integer`

Description: Size of the volume.

Parameter: `volumeTypeUUID`

Type: `string`

Description: OpenStack volume type of this volume.

Parameter: `projectUUID`

Type: `string`

Description: The OpenStack project which owns this volume.

Parameter: `encrypted`

Type: `boolean`

Description: Whether the volume is encrypted.

Parameter: `userUUID`

Type: `string`

Description: OpenStack user which created this volume.

Parameter: `bootable`

Type: `string`

Description: Whether the volume can be used to boot a new VM.

Parameter: `snapshotUUID`

Type: `string`

Description: OpenStack volume snapshot associated with this volume.

Parameter: `sourceVolumeUUID`

Type: `string`

Description: If set, this is the volume which was the source for this volume.

Parameter: `attachmentDevice`

Type: `string`

Description: Attachment device.

Parameter: `attachmentHostname`

Type: `string`

Description: Attachment hostname.

Parameter: `attachmentUUID`

Type: string

Description: Attachment UUID.

Parameter: attachmentServerUUID

Type: string

Description: Attachment server.

Parameter: attachmentVolumeUUID

Type: string

Description: Attachment volume UUID.

Parameter: metadataAttachedMode

Type: string

Description: Metadata attached mode.

Parameter: metadataReadOnly

Type: string

Description: Metadata readonly.

5.2.401 `OpenStackApiVolumeType` : `OpenStackApiEntity`

parent : `OpenStackApiEntity`

Parameter: extraSpecs

Type: string

Description: A JSON string containing any extra, custom, fields for this volume type.

Parameter: isPublic

Type: boolean

Description: Whether this type is visible to all Projects

Parameter: projectUUIDs

Type: list of strings

Description: Projects with access

5.2.402 `OpenStackAuthBackendHybrid` : `OpenStackAuthBackend`

parent : `OpenStackAuthBackend`

Parameter: defaultRoles

Type: list of strings

Description: Roles for users signed via LDAP

Parameter: defaultProject

Type: string

Description: Project for users signed via LDAP

Parameter: defaultDomain

Type: string

Description: Domain for users signed via LDAP

5.2.403 `OpenStackAuthBackendLDAPGroupSettings` : Entity**parent** : Entity**Parameter:** `treeDn`**Type:** string**Description:** Search base for groups**Parameter:** `filter`**Type:** string**Description:** LDAP search filter for groups**Parameter:** `objectClass`**Type:** string**Description:** LDAP objectclass for groups**Parameter:** `idAttribute`**Type:** string**Description:** LDAP attribute mapped to group id**Parameter:** `nameAttribute`**Type:** string**Description:** LDAP attribute mapped to group name**Parameter:** `memberAttribute`**Type:** string**Description:** LDAP attribute mapped to show group membership**Parameter:** `descAttribute`**Type:** string**Description:** LDAP attribute mapped to group description**Parameter:** `ignoredAttributes`**Type:** list of strings**Description:** List of attributes stripped off the group on update**Parameter:** `allowCreate`**Type:** boolean**Description:** Allow group creation in LDAP backend**Parameter:** `allowUpdate`**Type:** boolean**Description:** Allow group updates in LDAP backend**Parameter:** `allowDelete`**Type:** boolean**Description:** Allow group deletion in LDAP backend**Parameter:** `additionalAttributeMappings`

Type: list of strings

Description: List of additional LDAP attributes used for mapping additional attribute mappings for groups. Attribute mapping format is [LDAP Attr]>:[Group Attr]

5.2.404 OpenStackAuthBackendLDAPProjectSettings : Entity

parent : Entity

Parameter: treeDn

Type: string

Description: Search base for projects

Parameter: filter

Type: string

Description: LDAP search filter for projects

Parameter: objectClass

Type: string

Description: LDAP objectclass for projects

Parameter: idAttribute

Type: string

Description: LDAP attribute mapped to project id

Parameter: memberAttribute

Type: string

Description: LDAP attribute mapped to show project membership

Parameter: nameAttribute

Type: string

Description: LDAP attribute mapped to project name

Parameter: descAttribute

Type: string

Description: LDAP attribute mapped to project description

Parameter: enabledAttribute

Type: string

Description: LDAP attribute mapped to project enabled flag

Parameter: domainIdAttribute

Type: string

Description: LDAP attribute mapped to project domain id

Parameter: ignoredAttributes

Type: list of strings

Description: List of attributes stripped off the project on update

Parameter: allowCreate

Type: boolean

Description: Allow project creation in LDAP backend

Parameter: allowUpdate

Type: boolean

Description: Allow project updates in LDAP backend

Parameter: allowDelete

Type: boolean

Description: Allow project deletion in LDAP backend

Parameter: enabledEmulation

Type: boolean

Description: Alternative method to determine if a project is enabled or not by checking if they are a member of the 'enabled emulation dn' group

Parameter: enabledEmulationDn

Type: string

Description: DN of the group entry to hold enabled projects when using enabled emulation

Parameter: additionalAttributeMappings

Type: list of strings

Description: List of additional LDAP attributes used for mapping additional attribute mappings for projects. Attribute mapping format is [LDAP Attr]>:[Project Attr]

5.2.405 OpenStackAuthBackendLDAPRoleSettings : Entity

parent : Entity

Parameter: treeDn

Type: string

Description: Search base for roles

Parameter: filter

Type: string

Description: LDAP search filter for roles

Parameter: objectClass

Type: string

Description: LDAP objectclass for roles

Parameter: idAttribute

Type: string

Description: LDAP attribute mapped to role id

Parameter: nameAttribute

Type: string

Description: LDAP attribute mapped to role name

Parameter: memberAttribute

Type: string
Description: LDAP attribute mapped to show role membership

Parameter: ignoredAttributes
Type: list of strings
Description: List of attributes stripped off the role on update

Parameter: allowCreate
Type: boolean
Description: Allow role creation in LDAP backend

Parameter: allowUpdate
Type: boolean
Description: Allow role updates in LDAP backend

Parameter: allowDelete
Type: boolean
Description: Allow role deletion in LDAP backend

Parameter: additionalAttributeMappings
Type: list of strings
Description: List of additional LDAP attributes used for mapping additional attribute mappings for roles. Attribute mapping format is [LDAP Attr]>:[Role Attr]

5.2.406 OpenStackAuthBackendLDAP : OpenStackAuthBackend

parent : OpenStackAuthBackend
Parameter: useSqlBackendForAssignments
Type: boolean
Description: Use SQL backend for project and role management

Parameter: url
Type: string
Description: URL for connecting to the LDAP server

Parameter: username
Type: string
Description: User BindDN to query the LDAP server

Parameter: password
Type: string
Description: Password for BindDN to query the LDAP server

Parameter: suffix
Type: string
Description: LDAP server suffix

Parameter: useDumbMember

Type: boolean

Description: If true, will add a dummy member to groups. This is required if the objectclass for groups requires the 'member' attribute.

Parameter: dumbMember

Type: string

Description: DN of the 'dummy member' to use

Parameter: allowSubtreeDelete

Type: boolean

Description: Delete subtrees using the subtree delete control

Parameter: queryScope

Type: enum

Description: The LDAP scope for queries

Parameter: aliasDereferencing

Type: enum

Description: The LDAP dereferencing option for queries

Parameter: chaseReferrals

Type: boolean

Description: Referral chasing behavior for queries

Parameter: tls

Type: boolean

Description: Enable TLS for communicating with LDAP servers

Parameter: ca

Type: string

Description: CA certificate file path for communicating with LDAP servers

Parameter: caDir

Type: string

Description: CA certificate directory path for communicating with LDAP servers

Parameter: userSettings

Type: OpenStackAuthBackendLDAPUserSettings

Description: User-related LDAP backend settings

Parameter: groupSettings

Type: OpenStackAuthBackendLDAPGroupSettings

Description: Group-related LDAP backend settings

Parameter: projectSettings

Type: OpenStackAuthBackendLDAPProjectSettings

Description: Project-related LDAP backend settings

Parameter: roleSettings

Type: OpenStackAuthBackendLDAPRoleSettings

Description: Role-related LDAP backend settings

Parameter: sqlBackend

Type: OpenStackAuthBackendSQL

Description: SQL Backend settings

Parameter: useConnectionPool

Type: boolean

Description: Enable LDAP connection pooling

Parameter: connectionPoolSize

Type: unsigned integer

Description: Connection pool size

Parameter: connectionPoolLifetime

Type: unsigned integer

Description: Connection lifetime in seconds

Parameter: useAuthPool

Type: boolean

Description: Enable LDAP connection pooling for end user authentication

Parameter: authPoolSize

Type: unsigned integer

Description: End user auth connection pool size

Parameter: authPoolLifetime

Type: unsigned integer

Description: End user auth connection lifetime in seconds

5.2.407 OpenStackAuthBackendLDAPUserSettings : Entity

parent : Entity

Parameter: treeDn

Type: string

Description: Search base for users

Parameter: filter

Type: string

Description: LDAP search filter for users

Parameter: objectClass

Type: string

Description: LDAP objectclass for users

Parameter: idAttribute

Type: string

Description: LDAP attribute mapped to user id

Parameter: nameAttribute

Type: string

Description: LDAP attribute mapped to user name

Parameter: mailAttribute

Type: string

Description: LDAP attribute mapped to user email

Parameter: passwordAttribute

Type: string

Description: LDAP attribute mapped to user password

Parameter: enabledAttribute

Type: string

Description: LDAP attribute mapped to user enabled flag

Parameter: enabledAttributeInverted

Type: boolean

Description: Invert the meaning of the boolean enabled values

Parameter: groupMemberMappedAttribute

Type: string

Description: LDAP attribute mapped to group member value

Parameter: enabledMask

Type: unsigned integer

Description: Bitmask integer to indicate the bit that the enabled value is stored in if the LDAP server represents 'enabled' as a bit on an integer rather than a boolean. A value of '0' indicates the mask is not used.

Parameter: enabledDefault

Type: string

Description: Default value to enable users. This should match an appropriate int value if the LDAP server uses non-boolean (bitmask) values to indicate if a user is enabled or disabled.

Parameter: ignoredAttributes

Type: list of strings

Description: List of attributes stripped off the user on update

Parameter: defaultProjectIdAttribute

Type: string

Description: LDAP attribute mapped to default_project_id for users

Parameter: allowCreate

Type: boolean

Description: Allow user creation in LDAP backend

Parameter: allowUpdate

Type: boolean

Description: Allow user updates in LDAP backend

Parameter: allowDelete

Type: boolean

Description: Allow user deletion in LDAP backend

Parameter: enabledEmulation

Type: boolean

Description: Alternative method to determine if a user is enabled or not by checking if they are a member of the 'enabled emulation dn' group

Parameter: enabledEmulationDn

Type: string

Description: DN of the group entry to hold enabled users when using enabled emulation

Parameter: additionalAttributeMappings

Type: list of strings

Description: List of additional LDAP attributes used for mapping additional attribute mappings for users. Attribute mapping format is [LDAP Attr]:[User Attr]

5.2.408 OpenStackAuthBackendsSQL : OpenStackAuthBackend

parent : OpenStackAuthBackend

Parameter: database

Type: string

Description: *none*

Parameter: username

Type: string

Description: *none*

Parameter: password

Type: string

Description: *none*

Parameter: hostname

Type: string

Description: *none*

5.2.409 OpenStackAuthBackend : Entity

parent : Entity

Parameter: name

Type: string

Description: Backend Name

Parameter: identityDriver

Type: string

Description: Driver to use for authentication

Parameter: assignmentDriver

Type: string

Description: Driver to use for authentication

Parameter: domain

Type: string

Description: Domain to be served by this backend

5.2.410 OpenStackBareMetalApiRole : Role

parent : Role

Parameter: includeInHAProxy

Type: boolean

Description: Automatically include the nodes with this role in HAProxy configuration.

Parameter: frontendHAProxyNames

Type: list of strings

Description: If set to a name of HAProxy, automatically configure the nodes having this role only behind that particular HAProxy.

Parameter: isBackupEndpoint

Type: boolean

Description: Configure this API endpoint as a 'backup' backend in HAProxy (only used if primary backends are down).

Parameter: network

Type: reference to Network

Description: Network on which API endpoints listens.

Parameter: apiPort

Type: unsigned integer

Description: This field can be used to override the default port this service will listen on.

Parameter: extraStringList

Type: list of strings

Description: Number of worker threads.

5.2.411 OpenStackBareMetalConductorRole : Role

parent : Role

Parameter: extraStringList

Type: list of strings

Description: Reserved for future use

5.2.412 `OpenStackBareMetalDiscoverdDNsmasqRole` : Role**parent** : Role**Parameter:** `extraStringList`**Type:** list of strings**Description:** Reserved for future use.**5.2.413** `OpenStackBareMetalDiscoverdRole` : Role**parent** : Role**Parameter:** `extraStringList`**Type:** list of strings**Description:** Reserved for future use.**5.2.414** `OpenStackBlockStorage` : `OpenStackStorage`**parent** : `OpenStackStorage`**Parameter:** `volumeUUID`**Type:** string**Description:** Volume UUID assigned by OpenStack**Parameter:** `size`**Type:** unsigned integer**Description:** Size**Parameter:** `persistent`**Type:** boolean**Description:** Persistent storage will not be removed when instance is removed**Parameter:** `creationTime`**Type:** timestamp**Description:** Time of creation in EC2**Parameter:** `status`**Type:** string**Description:** Status of volume in OpenStack**Parameter:** `extraBool`**Type:** boolean**Description:** *none***Parameter:** `extraStringList`**Type:** list of strings**Description:** *none***Parameter:** `extraKey`**Type:** unsigned integer**Description:** *none*

5.2.415 `OpenStackComputeApiEC2Role` : Role**parent** : Role**Parameter:** `includeInHAProxy`**Type:** boolean**Description:** Automatically include the nodes with this role in HAProxy configuration.**Parameter:** `frontendHAProxyNames`**Type:** list of strings**Description:** If set to a name of HAProxy, automatically configure the nodes having this role only behind that particular HAProxy.**Parameter:** `isBackupEndpoint`**Type:** boolean**Description:** Configure this API endpoint as a 'backup' backend in HAProxy (only used if primary backends are down).**Parameter:** `network`**Type:** reference to Network**Description:** Network on which API endpoints listens.**Parameter:** `apiPort`**Type:** unsigned integer**Description:** This field can be used to override the default port this service will listen on.**Parameter:** `workers`**Type:** unsigned integer**Description:** Number of worker threads.**5.2.416** `OpenStackComputeApiMetadataRole` : Role**parent** : Role**Parameter:** `includeInHAProxy`**Type:** boolean**Description:** Automatically include the nodes with this role in HAProxy configuration.**Parameter:** `frontendHAProxyNames`**Type:** list of strings**Description:** If set to a name of HAProxy, automatically configure the nodes having this role only behind that particular HAProxy.**Parameter:** `isBackupEndpoint`**Type:** boolean**Description:** Configure this API endpoint as a 'backup' backend in HAProxy (only used if primary backends are down).**Parameter:** `network`**Type:** reference to Network**Description:** Network on which api listens

Parameter: apiPort

Type: unsigned integer

Description: This field can be used to override the default port this service will listen on.

Parameter: workers

Type: unsigned integer

Description: Number of worker threads.

5.2.417 OpenStackComputeApiPlacementRole : Role

parent : Role

Parameter: includeInHAProxy

Type: boolean

Description: Automatically include the nodes with this role in HAProxy configuration.

Parameter: frontendHAProxyNames

Type: list of strings

Description: If set to a name of HAProxy, automatically configure the nodes having this role only behind that particular HAProxy.

Parameter: isBackupEndpoint

Type: boolean

Description: Configure this API endpoint as a 'backup' backend in HAProxy (only used if primary backends are down).

Parameter: network

Type: reference to Network

Description: Network on which API endpoints listens.

Parameter: apiPort

Type: unsigned integer

Description: This field can be used to override the default port this service will listen on.

Parameter: workers

Type: unsigned integer

Description: Number of worker threads.

5.2.418 OpenStackComputeApiRole : Role

parent : Role

Parameter: includeInHAProxy

Type: boolean

Description: Automatically include the nodes with this role in HAProxy configuration.

Parameter: frontendHAProxyNames

Type: list of strings

Description: If set to a name of HAProxy, automatically configure the nodes having this role only behind that particular HAProxy.

Parameter: isBackupEndpoint

Type: boolean

Description: Configure this API endpoint as a 'backup' backend in HAProxy (only used if primary backends are down).

Parameter: network

Type: reference to Network

Description: Network on which API endpoints listens.

Parameter: apiPort

Type: unsigned integer

Description: This field can be used to override the default port this service will listen on.

Parameter: workers

Type: unsigned integer

Description: Number of worker threads.

Parameter: memcachedServers

Type: list of strings

Description: Coma separated list of endpoints

Parameter: autoResolveLocalMemcached

Type: boolean

Description: If 'Memcached servers' is not specified, but there is a local memcached, then use it

Parameter: notifyApiFaults

Type: boolean

Description: *none*

Parameter: maxLimit

Type: unsigned integer

Description: Max number of objects nova-api returns in one page of results.

5.2.419 `OpenStackComputeConductorRole` : Role

parent : Role

Parameter: workersCount

Type: unsigned integer

Description: Number of workers for the OpenStack Conductor service. Zero value - use all available cpus

5.2.420 `OpenStackComputeRole` : Role

parent : Role

Parameter: computeDriver

Type: enum

Description: Compute Driver to use for nova-compute. Anything other than the default of libvirt will require additional manual configuration.

Parameter: libvirtDomain

Type: enum

Description: The libvirt Domain.

Parameter: libvirtCPUMode

Type: enum

Description: Libvirt CPU Mode

Parameter: libvirtCPUModel

Type: string

Description: Libvirt CPU Model

Parameter: libvirtInjectPassword

Type: tri-boolean

Description: Inject the admin password at boot time, without an agent

Parameter: libvirtInjectKey

Type: tri-boolean

Description: Inject the ssh public key at boot time

Parameter: libvirtInjectPartition

Type: string

Description: The partition to inject to : -2 => disable, -1 => inspect (libguestfs only), 0 => not partitioned, >0 => partition number

Parameter: imageBackends

Type: list of OpenStackNovaImageBackend

Description: Using image backends

Parameter: statePath

Type: string

Description: The directory where nova-compute will keep the information about its state.

Parameter: instancesPath

Type: string

Description: The directory where nova-compute will keep information about instances (and, with some storage backends, their disks).

Parameter: libvirtdCustom

Type: list of strings

Description: Custom lines to be added to the libvirtd.conf

Parameter: vcpuPinSet

Type: string

Description: Defines which physical cpus instance can use

Parameter: resumeGuestsOnHostBoot

Type: boolean

Description: Determines whether nova-compute should automatically resume (start) VMs after a hypervisor restart

Parameter: vifPluggingTimeOut

Type: unsigned integer

Description: Number of seconds to wait for neutron vif plugging events

Parameter: vifPluggingIsFatal

Type: boolean

Description: Fail instance boot if vif plugging fails

Parameter: fsmounts

Type: list of FSMount

Description: Configure the entries placed in /etc/fstab

Parameter: diskCachemodes

Type: string

Description: Specific cachemodes to use for different disk types e.g: file=directsync,block=none

Parameter: delayForAutomaticServerEvacuation

Type: integer

Description: Delay, in seconds, after which the vms on the host will be evacuated once the host is marked as DOWN. Value of zero disables this feature

5.2.421 OpenStackComputeSchedulerRole : Role

parent : Role

Parameter: hostDiscoveryInterval

Type: unsigned integer

Description: Number of seconds in intervals for nova scheduler to discover new hypervisor hosts

5.2.422 OpenStackComputeVNCProxyRole : Role

parent : Role

Parameter: includeInHAProxy

Type: boolean

Description: Automatically include the nodes with this role in HAProxy configuration.

Parameter: frontendHAProxyNames

Type: list of strings

Description: If set to a name of HAProxy, automatically configure the nodes having this role only behind that particular HAProxy.

Parameter: isBackupEndpoint

Type: boolean

Description: Configure this API endpoint as a 'backup' backend in HAProxy (only used if primary backends are down).

Parameter: network

Type: reference to Network

Description: Network on which API endpoints listens.

Parameter: apiPort

Type: unsigned integer

Description: This field can be used to override the default port this service will listen on.

Parameter: novncProxyBaseURL

Type: string

Description: Novnc proxy base URL.

Parameter: workers

Type: unsigned integer

Description: Number of worker threads.

5.2.423 OpenStackDashboardRole : Role

parent : Role

Parameter: memcachedServer

Type: string

Description: Hostname or IP of the memcached server to be used to speed up Horizon.

Parameter: autoResolveLocalMemcached

Type: boolean

Description: If 'Memcached server' is not specified, but there is a local memcached, then use it

Parameter: allowedHosts

Type: list of strings

Description: List of DNS-names or IP addresses of the host running the dashboard

Parameter: allowAllHosts

Type: boolean

Description: Shortcut for the '*' in the allowed hosts

Parameter: apiResultPageSize

Type: unsigned integer

Description: Controls the number of items to be shown per page if API pagination is possible

Parameter: sessionTimeout

Type: unsigned integer

Description: Seconds of inactivity until user is considered as logged out

Parameter: apiResultLimit

Type: unsigned integer

Description: Number of object to display before providing a paging element

Parameter: debug

Type: boolean

Description: Controls whether exceptions generate HTTP 500 response and a display of sensitive information

Parameter: `timeZone`

Type: `string`

Description: Time zone identifier

Parameter: `openstackKeystoneUrl`

Type: `string`

Description: URL of the Keystone

Parameter: `enableSSL`

Type: `boolean`

Description: HTTPS support for OpenStack Dashboard

5.2.424 `OpenStackDataProcessingApiRole` : Role

parent : Role

Parameter: `includeInHAProxy`

Type: `boolean`

Description: Reserved for future use

Parameter: `frontendHAProxyNames`

Type: list of strings

Description: Reserved for future use

Parameter: `isBackupEndpoint`

Type: `boolean`

Description: Reserved for future use

Parameter: `network`

Type: reference to Network

Description: Network on which api listens

Parameter: `apiPort`

Type: unsigned integer

Description: *none*

5.2.425 `OpenStackDBaaSRole` : Role

parent : Role

Parameter: `runTroveAPI`

Type: `boolean`

Description: Reserved for future use

Parameter: `runTaskManager`

Type: `boolean`

Description: Reserved for future use

Parameter: `runTroveGuestAgent`

Type: boolean

Description: Reserved for future use

Parameter: runTroveScheduler

Type: boolean

Description: Reserved for future use

Parameter: runTroveConductor

Type: boolean

Description: Reserved for future use

Parameter: extraBool1

Type: boolean

Description: Reserved for future use

Parameter: extraBool2

Type: boolean

Description: Reserved for future use

Parameter: extraBool3

Type: boolean

Description: Reserved for future use

Parameter: extraLong1

Type: integer

Description: Reserved for future use

Parameter: extraStringList1

Type: list of strings

Description: Reserved for future use

Parameter: extraStringList2

Type: list of strings

Description: Reserved for future use

5.2.426 OpenStackDefaultUserRole : Entity

parent : Entity

Parameter: name

Type: string

Description: OpenStack user role name

Parameter: tenants

Type: list of strings

Description: Associated OpenStack project names. These project will be created if do not exist yet. The project names may contain \${username} that will be replaced to a particular user name

5.2.427 `OpenStackIdentityApiRole : Role`**parent :** Role**Parameter:** `includeInHAProxy`**Type:** boolean**Description:** Automatically include the nodes with this role in HAProxy configuration.**Parameter:** `frontendHAProxyNames`**Type:** list of strings**Description:** If set to a name of HAProxy, automatically configure the nodes having this role only behind that particular HAProxy.**Parameter:** `isBackupEndpoint`**Type:** boolean**Description:** Configure this API endpoint as a 'backup' backend in HAProxy (only used if primary backends are down).**Parameter:** `network`**Type:** reference to Network**Description:** Network on which API endpoints listens.**Parameter:** `networkForAdmin`**Type:** reference to Network**Description:** Network on which the Admin api endpoint listens on.**Parameter:** `apiPort`**Type:** unsigned integer**Description:** This field can be used to override the default port this service will listen on.**Parameter:** `apiPortForAdmin`**Type:** unsigned integer**Description:** This field can be used to override the default port this service will listen on.**Parameter:** `workers`**Type:** unsigned integer**Description:** Number of worker threads.**Parameter:** `workersForAdmin`**Type:** unsigned integer**Description:** Number of worker threads for the admin endpoint.**Parameter:** `tokenPersistenceBackend`**Type:** enum**Description:** Only applicable to non-fernet tokens**Parameter:** `caching`**Type:** boolean

Description: Enable caching globally. Must be enabled for other individual caching layers (e.g. roles, tokens, services) to work. Those individual layers can then be disabled individually.

Parameter: `tokenCacheBackend`

Type: enum

Description: Where to cache various resources, to speed up their retrieval. Caching speeds up retrieval, at the risk of data being slightly out of date.

Parameter: `cacheResources`

Type: boolean

Description: Whether or not to cache this type of the resources. Caching speeds up retrieval, at the risk of data being slightly out of date.

Parameter: `cacheResourcesTime`

Type: unsigned integer

Description: Determines the amount of time after which the cached values are considered too old, and instead should be retrieved from the actual backend.

Parameter: `cacheRoles`

Type: boolean

Description: Whether or not to cache this type of the resources. Caching speeds up retrieval, at the risk of data being slightly out of date.

Parameter: `cacheRolesTime`

Type: unsigned integer

Description: Determines the amount of time after which the cached values are considered too old, and instead should be retrieved from the actual backend.

Parameter: `cacheIdentity`

Type: boolean

Description: Whether or not to cache this type of the resources. Caching speeds up retrieval, at the risk of data being slightly out of date.

Parameter: `cacheIdentityTime`

Type: unsigned integer

Description: Determines the amount of time after which the cached values are considered too old, and instead should be retrieved from the actual backend.

Parameter: `cacheDomainConfig`

Type: boolean

Description: Whether or not to cache this type of the resources. Caching speeds up retrieval, at the risk of data being slightly out of date.

Parameter: `cacheDomainConfigTime`

Type: unsigned integer

Description: Determines the amount of time after which the cached values are considered too old, and instead should be retrieved from the actual backend.

Parameter: `cacheServiceCatalog`

Type: `boolean`

Description: Whether or not to cache this type of the resources. Caching speeds up retrieval, at the risk of data being slightly out of date.

Parameter: `cacheServiceCatalogTime`

Type: `unsigned integer`

Description: Determines the amount of time after which the cached values are considered too old, and instead should be retrieved from the actual backend.

Parameter: `cacheTokens`

Type: `boolean`

Description: Whether or not to cache this type of the resources. Caching speeds up retrieval, at the risk of data being slightly out of date.

Parameter: `cacheTokensTime`

Type: `unsigned integer`

Description: Determines the amount of time after which the cached values are considered too old, and instead should be retrieved from the actual backend.

Parameter: `memcachedServer`

Type: `string`

Description: Whether or not to cache this type of the resources. Caching speeds up retrieval, at the risk of data being slightly out of date.

Parameter: `autoResolveLocalMemcached`

Type: `boolean`

Description: If 'Memcached server' is not specified, but there is a local memcached on this node, then use it

Parameter: `enableAdminEndpoint`

Type: `boolean`

Description: Whether the admin endpoint should be enable. In most cases there's no reason to disable it.

5.2.428 `OpenStackImageApiRole` : `Role`

parent : `Role`

Parameter: `includeInHAProxy`

Type: `boolean`

Description: Automatically include the nodes with this role in HAProxy configuration.

Parameter: `frontendHAProxyNames`

Type: `list of strings`

Description: If set to a name of HAProxy, automatically configure the nodes having this role only behind that particular HAProxy.

Parameter: `isBackupEndpoint`

Type: `boolean`

Description: Configure this API endpoint as a 'backup' backend in HAProxy (only used if primary backends are down).

Parameter: network

Type: reference to Network or None

Description: Network on which API endpoints listens.

Parameter: apiPort

Type: unsigned integer

Description: This field can be used to override the default port this service will listen on.

Parameter: workers

Type: unsigned integer

Description: Number of worker threads.

Parameter: imageBackends

Type: list of OpenStackImageBackend

Description: Using image storage backends

Parameter: enableHTTPStore

Type: boolean

Description: Enables glance HTTP store.

5.2.429 OpenStackImageBackendCeph : OpenStackImageBackend

parent : OpenStackImageBackend

Parameter: rbdStoreUser

Type: string

Description: RADOS user to authenticate as

Parameter: rbdStorePool

Type: string

Description: RADOS pool in which images are stored

Parameter: rbdStoreChunkSize

Type: unsigned integer

Description: Images will be chunked into objects of this size (in megabytes)

Parameter: rbdStoreCephConf

Type: string

Description: Path to the ceph configuration file to use

5.2.430 OpenStackImageBackendFS : OpenStackImageBackend

parent : OpenStackImageBackend

Parameter: filesystemBackendStoragePath

Type: string

Description: Directory path for filesystem backend storage of images

Parameter: isOnSharedStorage

Type: boolean

Description: *none*

Parameter: fsmounts

Type: list of FSMount

Description: Configure the entries placed in /etc/fstab

5.2.431 `OpenStackImageBackend` : Entity

parent : Entity

Parameter: name

Type: string

Description: Backend name

Parameter: defaultStore

Type: string

Description: Which backend scheme should be used by Glance

Parameter: showImageDirectUrl

Type: boolean

Description: Return the URL that references where the data is stored on the backend storage system.

5.2.432 `OpenStackIntermediateStorage` : `CMJobIntermediateStorage`

parent : `CMJobIntermediateStorage`

Parameter: container

Type: string

Description: Container name to place data into

5.2.433 `OpenStackMessageQueueServerRole` : Role

parent : Role

Parameter: messageQueueBackend

Type: enum

Description: Message queue backend.

Parameter: cookie

Type: string

Description: This value is typically managed by CMDaemon and there's typically no reason to change it. The cookie is shared across all instances of a RabbitMQ cluster.

Parameter: HAMode

Type: boolean

Description: Whether or not replicate all queues and exchanges across all message brokers (nodes). The value of 'false' implies that no ha-mode policy will be set.

Parameter: messageTTL

Type: integer

Description: Number of seconds after which messages are removed from queue if not consumed. The value of '-1' means no TTL (messages persist, i.e. don't set 'message-ttl' policy). The value of 0 means deliver immediately or delete if the delivery is impossible (not recommended).

Parameter: `statisticsCollectionInterval`

Type: integer

Description: Number of seconds specifying how often internal statistics should be collected. Low values might have detrimental impact on the performance

Parameter: `nagelsAlgorithm`

Type: boolean

Description: Enabling groups together small TCP traffic. When enabled, message transmit latency will increase, but network utilisation will drop. It is recommended to have this option disabled, unless network bandwidth starts becoming an issue.

5.2.434 `OpenStackNetworkApiRole` : Role

parent : Role

Parameter: `includeInHAProxy`

Type: boolean

Description: Automatically include the nodes with this role in HAProxy configuration.

Parameter: `frontendHAProxyNames`

Type: list of strings

Description: If set to a name of HAProxy, automatically configure the nodes having this role only behind that particular HAProxy.

Parameter: `isBackupEndpoint`

Type: boolean

Description: Configure this API endpoint as a 'backup' backend in HAProxy (only used if primary backends are down).

Parameter: `network`

Type: reference to Network

Description: Network on which API endpoints listens.

Parameter: `apiPort`

Type: unsigned integer

Description: This field can be used to override the default port this service will listen on.

Parameter: `workers`

Type: unsigned integer

Description: Number of worker threads.

Parameter: `rpcWorkers`

Type: unsigned integer

Description: Number of RPC worker threads. It makes sense to increase this value if neutron-server is slow in processing AMQP messages or if you have a lot of Neutron agents.

5.2.435 `OpenStackNetworkDHCPAgentRole` : Role

parent : Role

Parameter: `dnsmasqCustom`

Type: list of strings

Description: Custom lines to be added to the dnsmasq.bright.conf

Parameter: DHCPDomain

Type: string

Description: DHCP domain.

Parameter: option1

Type: boolean

Description: *none*

Parameter: option2

Type: boolean

Description: *none*

Parameter: option3

Type: string

Description: *none*

5.2.436 OpenStackNetworkL3AgentRole : Role

parent : Role

Parameter: agentmode

Type: string

Description: Agent mode, when using Distributed Virtual Routers (DVR), set to dvr on compute nodes and dvr_snat on network nodes. Otherwise set to legacy.

Parameter: option1

Type: boolean

Description: *none*

Parameter: option2

Type: boolean

Description: *none*

Parameter: option3

Type: string

Description: *none*

5.2.437 OpenStackNetworkMetadataAgentRole : Role

parent : Role

Parameter: option1

Type: boolean

Description: *none*

Parameter: option2

Type: boolean

Description: *none*

Parameter: option3

Type: string

Description: *none*

5.2.438 OpenStackNetworkOVSAgentRole : Role

parent : Role

Parameter: enableDistributedRouters

Type: boolean

Description: Enable distributed virtual routers (DVR).

Parameter: option1

Type: boolean

Description: *none*

Parameter: option2

Type: boolean

Description: *none*

Parameter: option3

Type: string

Description: *none*

5.2.439 OpenStackNovaImageBackendCeph : OpenStackNovaImageBackend

parent : OpenStackNovaImageBackend

Parameter: rbdUser

Type: string

Description: The RADOS client name for accessing rbd volumes

Parameter: rbdSecretUuid

Type: string

Description: The libvirt uuid of the secret for the rbd_uservolume

Parameter: libvirtImagesRbdPool

Type: string

Description: The RADOS pool in which rbd volumes are stored

Parameter: libvirtImagesRbdCephConf

Type: string

Description: Path to the ceph configuration file to use

5.2.440 OpenStackNovaImageBackendCow : OpenStackNovaImageBackend

parent : OpenStackNovaImageBackend

Parameter: useCowImages

Type: boolean

Description: Whether to use cow images.

5.2.441 OpenStackNovaImageBackend : Entity

parent : Entity

Parameter: name

Type: string

Description: Backend Name

Parameter: libvirtImagesType

Type: string

Description: Libvirt images type

5.2.442 `OpenStackObjectAccountRole : Role`

parent : Role

Parameter: network

Type: reference to Network

Description: Network on which api listens

Parameter: apiPort

Type: unsigned integer

Description: This field can be used to override the default port this service will listen on.

Parameter: workers

Type: unsigned integer

Description: Number of worker threads.

5.2.443 `OpenStackObjectApiRole : Role`

parent : Role

Parameter: network

Type: reference to Network

Description: Network on which api listens

Parameter: apiPort

Type: unsigned integer

Description: This field can be used to override the default port this service will listen on.

Parameter: workers

Type: unsigned integer

Description: Number of worker threads.

Parameter: allowPublicContainerAccess

Type: boolean

Description: Whether or not to allow public access to the container

5.2.444 `OpenStackObjectContainerRole : Role`

parent : Role

Parameter: network

Type: reference to Network

Description: Network on which api listens

Parameter: apiPort

Type: unsigned integer

Description: This field can be used to override the default port this service will listen on.

Parameter: workers

Type: unsigned integer

Description: Number of worker threads.

5.2.445 OpenStackObjectStoreRole : Role

parent : Role

Parameter: network

Type: reference to Network

Description: Network on which api listens

Parameter: apiPort

Type: unsigned integer

Description: This field can be used to override the default port this service will listen on.

Parameter: workers

Type: unsigned integer

Description: Number of worker threads.

5.2.446 OpenStackOrchestrationApiRole : Role

parent : Role

Parameter: includeInHAProxy

Type: boolean

Description: Automatically include the nodes with this role in HAProxy configuration.

Parameter: frontendHAProxyNames

Type: list of strings

Description: If set to a name of HAProxy, automatically configure the nodes having this role only behind that particular HAProxy.

Parameter: isBackupEndpoint

Type: boolean

Description: Configure this API endpoint as a 'backup' backend in HAProxy (only used if primary backends are down).

Parameter: network

Type: reference to Network

Description: Network on which API endpoints listens.

Parameter: apiPort

Type: unsigned integer

Description: This field can be used to override the default port this service will listen on.

Parameter: apiPortCnf

Type: unsigned integer

Description: This field can be used to override the default port this service will listen on.

Parameter: `workers`

Type: unsigned integer

Description: Number of worker threads.

Parameter: `maxHeaderLine`

Type: unsigned integer

Description: Maximum size of the header line.

5.2.447 `OpenStackOrchestrationRole` : `Role`

parent : `Role`

Parameter: `workers`

Type: unsigned integer

Description: Number of worked threads of the heat-engine process

Parameter: `maxResourcesPerStack`

Type: unsigned integer

Description: Maximum number of resources per stack.

Parameter: `rpcResponseTimeout`

Type: unsigned integer

Description: Amount of seconds to wait for a reply for AMQP messages.

5.2.448 `OpenStackSettingsAdvanced` : `Entity`

parent : `Entity`

Parameter: `customAMQPHost`

Type: string

Description: Custom AMQP host used by OpenStack Service. This can be used to redirect OpenStack service to a custom HA AMQP cluster.

Parameter: `customBackendHAProxyHost`

Type: string

Description: Custom backend HAProxy host

Parameter: `lastResortBackendHAProxyHost`

Type: string

Description: When determining HAProxy host dynamically for a given node, if no UP Haproxy hosts were found, this one will be used as a fallback.

Parameter: `allowCrossAZBackendHAProxyConnections`

Type: boolean

Description: Used when dynamically determining the host of HA proxy node

Parameter: `backendHAProxiesForNodes`

Type: list of strings

Description: *none*

Parameter: `determineBackendHAProxiesDynamically`

Type: boolean

Description: Reserved for future use.

Parameter: encryptApiEndpoints

Type: boolean

Description: Encrypt API calls with SSL. This will configure OpenStack API endpoints to use default SSL certificates. Note, if you enable it, you will still have to configure a proper SSL certificate for the endpoints.

Parameter: rbdSecretUuid

Type: string

Description: Default secret UUID for new Ceph storage roles

Parameter: enableExtraValidation

Type: boolean

Description: Enable extra validation for OpenStack entities

Parameter: extraBool1

Type: boolean

Description: *none*

Parameter: extraBool2

Type: boolean

Description: *none*

Parameter: extraBool3

Type: boolean

Description: *none*

Parameter: extraBool4

Type: boolean

Description: *none*

Parameter: agentDownTime

Type: unsigned integer

Description: After how long agent is considered down. Should be twice as long as report interval

Parameter: agentReportInterval

Type: unsigned integer

Description: How often (seconds) should various OpenStack agent report to their core components. Only applies to OpenStack components which have support for that feature (e.g. Neutron).

Parameter: enableTelemetryService

Type: boolean

Description: *none*

Parameter: enableDataProcessingService

Type: boolean

Description: *none*

Parameter: `enableBareMetalService`

Type: `boolean`

Description: *none*

Parameter: `maintainServicesInOpenStack`

Type: `boolean`

Description: Whether CMDaemon should automatically maintain service entries in keystone

Parameter: `maintainEndpointsInOpenStack`

Type: `boolean`

Description: Whether CMDaemon should automatically maintain endpoint entries in keystone

Parameter: `customPublicHostnameForMaintainedEndpoints`

Type: `string`

Description: *none*

Parameter: `customInternalHostnameForMaintainedEndpoints`

Type: `string`

Description: *none*

Parameter: `servicesExcludedFromMaintenance`

Type: `list of strings`

Description: *none*

Parameter: `enableCallbacksFromOpenStack`

Type: `boolean`

Description: *none*

Parameter: `maintainHostAggregates`

Type: `boolean`

Description: Whether CMDaemon should automatically update Host Aggregates

Parameter: `enableRabbitMqSsl`

Type: `boolean`

Description: *none*

Parameter: `revocationCacheTime`

Type: `unsigned integer`

Description: Configures the value of 'revocation_cache_time' in various OpenStack config files.

Parameter: `regionName`

Type: `string`

Description: The name of the cloud region represented by this cluster.

Parameter: `regionExternalKeystoneURL`

Type: string

Description: Set this to keystone auth RUL if your Keystone is running only in a external region of this cloud.

Parameter: cinderExchange

Type: string

Description: Cinder RabbitMQ notification exchange name

Parameter: keystoneExchange

Type: string

Description: Keystone RabbitMQ notification exchange name

Parameter: neutronExchange

Type: string

Description: Neutron RabbitMQ notification exchange name

Parameter: glanceExchange

Type: string

Description: Glance RabbitMQ notification exchange name

Parameter: novaExchange

Type: string

Description: Nova RabbitMQ notification exchange name

Parameter: heatExchange

Type: string

Description: Heat RabbitMQ notification exchange name

Parameter: saharaExchange

Type: string

Description: Sahara RabbitMQ notification exchange name

Parameter: ironicExchange

Type: string

Description: Ironic RabbitMQ notification exchange name

Parameter: troveExchange

Type: string

Description: Trove RabbitMQ notification exchange name

Parameter: periodicCleanupInterval

Type: unsigned integer

Description: *none*

Parameter: glanceAllowedCrossOriginURLs

Type: list of strings

Description: List of the Horizon Dashboard URLs (domain names or IPs) which are allowed to upload directly to Glance API. This field should contain all URLs under which the end users can access Horizon. This is needed image upload via the browser to work. Not relevant for uploading images via the CLI.

Parameter: `scriptToRunForNewProjects`

Type: `string`

Description: This, user defined, script will executed on the head node for each new Project (tenant) which gets created to OpenStack. This makes it possible to customize the new project e.g. by creating a default networking environment for it.

Parameter: `deployedComponents`

Type: `list of strings`

Description: *none*

Parameter: `extraString1`

Type: `string`

Description: Name of configuration group to use as a rabbit mq cluster for OpenStack.

Parameter: `extraString2`

Type: `string`

Description: *none*

Parameter: `extraString3`

Type: `string`

Description: *none*

Parameter: `extraString4`

Type: `string`

Description: *none*

Parameter: `extraInt1`

Type: `integer`

Description: *none*

Parameter: `extraStringList1`

Type: `list of strings`

Description: *none*

Parameter: `extraStringList2`

Type: `list of strings`

Description: *none*

Parameter: `extraStringList3`

Type: `list of strings`

Description: *none*

Parameter: `extraStringList4`

Type: list of strings

Description: *none*

Parameter: dontStartServices

Type: list of strings

Description: Don't autostart these OpenStack services

5.2.449 OpenStackSettingsAuthentication : Entity

parent : Entity

Parameter: defaultDomainId

Type: string

Description: Domain to use for all Identity API v2 requests

Parameter: domainConfigDir

Type: string

Description: Path for domain specific identity configuration files

Parameter: keystoneTokenFormat

Type: enum

Description: Format of the Keystone token

Parameter: authBackends

Type: list of OpenStackAuthBackend

Description: Auth backends

Parameter: customPublicAuthHost

Type: string

Description: Custom public keystone auth host.

Parameter: customInternalAuthHost

Type: string

Description: Custom internal keystone auth host.

Parameter: tokenValidityMinutes

Type: unsigned integer

Description: How long tokens should be valid, in minutes. Does not apply to Fernet tokens (where token validity is determined by how often keys are rotated).

5.2.450 OpenStackSettingsCMDaemonInteractions : Entity

parent : Entity

Parameter: cmdaemonIdentityURL

Type: string

Description: The OpenStack Keystone identity URL which CMDaemon should use when connecting to OpenStack.

Parameter: cmdaemonOpenStackInterfaceDriver

Type: enum

Description: Method which should be used by CMDaemon to talk to OpenStack. libcurl is typically faster.

Parameter: `disableObjectRetrieval`

Type: boolean

Description: By default CMDaemon will retrieve the various OpenStack objects (like users, VMs, projects, subnets, routers) from OpenStack periodically. This disabled the said retrieval. It will reduce the load on OpenStack API endpoints, at the expense of not being able to view/edit OpenStack object modified directly via OpenStack APIs.

Parameter: `storeOpenStackObjectsInCMDaemonDatabase`

Type: boolean

Description: Whether to cache the state of OpenStack objects in CMDaemon's database. It makes sense to disable this for large OpenStack clouds and/or to reduce the load on CMDaemon's database.

Parameter: `objectRetrievalInterval`

Type: unsigned integer

Description: If OpenStack object retrieval is enabled, how often should it be performed. 1 -> every 30 seconds, 2 -> every 60 seconds, etc. Increasing this value will reduce the load on OpenStack APIs.

Parameter: `objectTypesToExcludeFromRetrieval`

Type: list of strings

Description: By default CMDaemon retrieves many types of objects from OpenStack for the purposes of displaying them in Bright UI. If you want to restrict the set of types of retrieved from OpenStack to reduce the load on particular parts of OpenStack control plane, set the names of these objects in this field.

Parameter: `objectTypesToExcludeFromDBStorage`

Type: list of strings

Description: Named of classes of OpenStack object which should be excluded from being stored (cached) in CMDaemon's database. Useful if certain types of object in your cloud change too often which causes a lot of load on CMDaemon's database. The names of classes should be Python class names, e.g. 'OpenStackApiServer', 'OpenStackApiProject'.

Parameter: `maxConcurrentActions`

Type: unsigned integer

Description: Maximum number of concurrent interactions with OpenStack APIs. Increase this value to reduce the amount of time a OpenStack API interaction is waiting to be execute, at the expense of load on OpenStack APIs.

Parameter: `preferAdminToken`

Type: boolean

Description: Prefer to use admin token for API calls whenever possible. This should only be enabled during the OpenStack deployment phase.

Parameter: `apiCallAttempts`

Type: unsigned integer

Description: How many times a API call to OpenStack is attempted before giving up.

Parameter: enableMqListener

Type: boolean

Description: Enable MessageQueue event listener. This will cause CMDaemon to listen on OpenStack notification queue for notifications about e.g. created/modified objects, and retrieve (if retrieval is not disabled) the changes immediately (instead of pooling for changes periodically).

Parameter: imageUUIDForHealthchecks

Type: string

Description: *none*

Parameter: monitoringDataValidity

Type: unsigned integer

Description: How long old monitoring info (removed tenants, etc) should be kept in the database.

Parameter: monitoringDataValidityVMs

Type: unsigned integer

Description: How long old monitoring info (for VMs) should be kept in the database.

Parameter: extraOptions

Type: list of strings

Description: Various, advanced, flags.

5.2.451 OpenStackSettingsCollection : Entity

parent : Entity

Parameter: credentials

Type: OpenStackSettingsCredentials

Description: Submode containing credential configuration

Parameter: database

Type: OpenStackSettingsDatabase

Description: Submode containing OpenStack DB settings

Parameter: advanced

Type: OpenStackSettingsAdvanced

Description: Various advanced OpenStack settings

Parameter: authentication

Type: OpenStackSettingsAuthentication

Description: Authentication-related OpenStack settings

Parameter: userPortal

Type: OpenStackSettingsUserPortal

Description: Settings for OpenStack page in User Portal

Parameter: cmdaemonInteractions

Type: OpenStackSettingsCMDaemonInteractions

Description: Advanced setting on how CMDaemon interacts with OpenStack

Parameter: users

Type: OpenStackSettingsUsers

Description: User related settings

Parameter: logging

Type: OpenStackSettingsLogging

Description: Submode containing logging settings

Parameter: ports

Type: OpenStackSettingsPorts

Description: Global settings of ports of individual OpenStack services

Parameter: networking

Type: OpenStackSettingsNetworking

Description: Global networking (neutron) settings

Parameter: compute

Type: OpenStackSettingsCompute

Description: Global compute (nova) settings

Parameter: quota

Type: OpenStackSettingsQuota

Description: Resource quota (limits) settings

5.2.452 OpenStackSettingsCompute : Entity

parent : Entity

Parameter: VNCProxyHostname

Type: string

Description: The hostname, or IP address, which will be used by the OpenStack end users using the horizon dashboard to access the VNC consoles of their VMs. Typically this should be the externally-reachable address/hostname of the head node, or, in some other cases, one of the HAProxy nodes.

Parameter: cpuAllocationRatio

Type: float

Description: Allocation ratio for the CPU. Hypervisor with 16 cores, and allocation ratio of 1.0 will effectively be capable of hosting VM consuming in total 32 vCPUs. The less CPU-hungry the VMs are, the larger this ratio can be.

Parameter: ramAllocationRatio

Type: float

Description: RAM allocation ratio. Modern hypervisor make use of Kernel same memory page merging. If multiple VMs have memory page which are identical, those pages are automatically merged by the hypervisor's kernel. If the VMs are expected to have little to no identical memory pages, it's best to have this value set to 1.0 (meaning no overallocation).

Parameter: ramWeightMultiplier

Type: float

Description: This field determines how hosts with more or less available RAM are weighed. A positive value will result in the scheduler preferring hosts with more available RAM, and a negative number will result in the scheduler preferring hosts with less available RAM. Another way to look at it is that positive values for this option will tend to spread instances across many hosts, while negative values will tend to fill up (stack) hosts as much as possible before scheduling to a less-used host. The absolute value, whether positive or negative, controls how strong the RAM weigher is relative to other weighers. This option is only used by the FilterScheduler and its subclasses; if you use a different scheduler, this option has no effect. Also note that this setting only affects scheduling if the 'ram' weigher is enabled.

Parameter: `diskAllocationRatio`

Type: float

Description: Disk allocation ratio.

Parameter: `schedulerFilters`

Type: list of strings

Description: OpenStack nova-scheduler filters which are used to determine which hypervisor host are eligible for hosting a specific VM. For the full list of available names see `/usr/lib/python2.7/site-packages/nova/scheduler/filters` on one of the OpenStack controller nodes.

Parameter: `reservedHostMemory`

Type: unsigned integer

Description: The amount of operating memory reserver for the hypervisor's operating system (and therefore not used for hosting VMs).

Parameter: `maxInstancesPerHost`

Type: unsigned integer

Description: Maximum number of instances per host. Must go in hand with having the 'NumInstancesFilter' scheduler filter set.

Parameter: `schedulerMaxAttempts`

Type: unsigned integer

Description: How many times nova-scheduler should attempt to schedule a VM onto a hypervisor. This happens e.g. when creating a new VM, or unshelving an existing (but shelved) VM.

Parameter: `liveMigrationEnabled`

Type: boolean

Description: Whether or not live migration is enable. This is migration of running VM between hypervisor hosts. For live migration to work properly it's required to either have homogenous hypervisor CPUs, or alternatively, nova-compute configure to use the set of CPU flags representing the smaller common denominator between all hypervisor nodes.

Parameter: `liveMigrationRetries`

Type: unsigned integer

Description: The amount of times a live migration attempt will be attempted.

Parameter: `defaultAvailabilityZone`

Type: string

Description: AZ for hosts not inside any az-defining host aggregates

5.2.453 `OpenStackSettingsCredentials : Entity`**parent :** Entity**Parameter:** `serviceProjectName`**Type:** string**Description:** The name of the project(tenant) used for OpenStack's internal services**Parameter:** `adminToken`**Type:** string**Description:** A special token which can be used to give access to Keystone's APIs. This field should be set only when deploying OpenStack.**Parameter:** `adminUserPassword`**Type:** string**Description:** The password for the cloud 'admin' user**Parameter:** `adminUserName`**Type:** string**Description:** *none***Parameter:** `CMDaemonOpenStackUsername`**Type:** string**Description:** Part of credentials used by CMDaemon to auth with OpenStack**Parameter:** `CMDaemonOpenStackPassword`**Type:** string**Description:** Part of credentials used by CMDaemon to auth with OpenStack**Parameter:** `CMDaemonOpenStackProjectUUID`**Type:** string**Description:** Part of credentials used by CMDaemon to auth with OpenStack**Parameter:** `CMDaemonOpenStackProjectName`**Type:** string**Description:** Part of credentials used by CMDaemon to auth with OpenStack**Parameter:** `CMDaemonOpenStackDomainUUID`**Type:** string**Description:** Part of credentials used by CMDaemon to auth with OpenStack**Parameter:** `novaUsername`**Type:** string**Description:** Credentials of an internal OpenStack service user**Parameter:** `novaPassword`**Type:** string**Description:** Credentials of an internal OpenStack service user

Parameter: userEC2Username
Type: string
Description: Credentials of an internal OpenStack service user

Parameter: userEC2Password
Type: string
Description: Credentials of an internal OpenStack service user

Parameter: keystoneUsername
Type: string
Description: Credentials of an internal OpenStack service user

Parameter: keystonePassword
Type: string
Description: Credentials of an internal OpenStack service user

Parameter: glanceUsername
Type: string
Description: Credentials of an internal OpenStack service user

Parameter: glancePassword
Type: string
Description: Credentials of an internal OpenStack service user

Parameter: cinderUsername
Type: string
Description: Credentials of an internal OpenStack service user

Parameter: cinderPassword
Type: string
Description: Credentials of an internal OpenStack service user

Parameter: heatUsername
Type: string
Description: Credentials of an internal OpenStack service user

Parameter: heatPassword
Type: string
Description: Credentials of an internal OpenStack service user

Parameter: neutronUsername
Type: string
Description: Credentials of an internal OpenStack service user

Parameter: neutronPassword
Type: string

Description: Credentials of an internal OpenStack service user

Parameter: radosGatewayUsername

Type: string

Description: Credentials of an internal OpenStack service user

Parameter: radosGatewayPassword

Type: string

Description: Credentials of an internal OpenStack service user

Parameter: metadataProxySharedSecret

Type: string

Description: Credentials of an internal OpenStack service user

Parameter: troveUsername

Type: string

Description: Credentials of an internal OpenStack service user

Parameter: trovePassword

Type: string

Description: Credentials of an internal OpenStack service user

Parameter: messageQueueUsername

Type: string

Description: Credentials of an internal OpenStack service user

Parameter: messageQueuePassword

Type: string

Description: Credentials of an internal OpenStack service user

Parameter: ceilometerUsername

Type: string

Description: Credentials of an internal OpenStack service user

Parameter: ceilometerPassword

Type: string

Description: Credentials of an internal OpenStack service user

Parameter: saharaUsername

Type: string

Description: Credentials of an internal OpenStack service user

Parameter: saharaPassword

Type: string

Description: Credentials of an internal OpenStack service user

Parameter: ironicUsername

Type: string

Description: Credentials of an internal OpenStack service user

Parameter: ironicPassword

Type: string

Description: Credentials of an internal OpenStack service user

Parameter: swiftUsername

Type: string

Description: Credentials of an internal OpenStack service user

Parameter: swiftPassword

Type: string

Description: Credentials of an internal OpenStack service user

Parameter: novaUserUUID

Type: string

Description: OpenStack user UUID of the internal 'nova' service user

Parameter: neutronUserUUID

Type: string

Description: OpenStack user UUID of the internal 'neutron' service user

Parameter: heatDAUsername

Type: string

Description: Credentials of an internal OpenStack service user

Parameter: heatDAPassword

Type: string

Description: Credentials of an internal OpenStack service user

Parameter: extraString1

Type: string

Description: *none*

Parameter: extraString2

Type: string

Description: *none*

Parameter: extraString3

Type: string

Description: *none*

Parameter: extraString4

Type: string

Description: *none*

Parameter: extraString5

Type: string

Description: *none*

Parameter: extraString6

Type: string

Description: *none*

Parameter: extraString7

Type: string

Description: *none*

Parameter: extraString8

Type: string

Description: *none*

Parameter: extraString9

Type: string

Description: *none*

Parameter: extraString10

Type: string

Description: *none*

5.2.454 OpenStackSettingsDatabase : Entity

parent : Entity

Parameter: novaDBName

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: novaDBUsername

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: novaDBPassword

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: novaDBHost

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: novaApiDBName

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: novaApiDBUsername

Type: string
Description: Internal OpenStack SQL database access credentials

Parameter: novaApiDBPassword
Type: string
Description: Internal OpenStack SQL database access credentials

Parameter: novaApiDBHost
Type: string
Description: Internal OpenStack SQL database access credentials

Parameter: cinderDBName
Type: string
Description: Internal OpenStack SQL database access credentials

Parameter: cinderDBUsername
Type: string
Description: Internal OpenStack SQL database access credentials

Parameter: cinderDBPassword
Type: string
Description: Internal OpenStack SQL database access credentials

Parameter: cinderDBHost
Type: string
Description: Internal OpenStack SQL database access credentials

Parameter: glanceDBName
Type: string
Description: Internal OpenStack SQL database access credentials

Parameter: glanceDBUsername
Type: string
Description: Internal OpenStack SQL database access credentials

Parameter: glanceDBPassword
Type: string
Description: Internal OpenStack SQL database access credentials

Parameter: glanceDBHost
Type: string
Description: Internal OpenStack SQL database access credentials

Parameter: keystoneDBName
Type: string
Description: Internal OpenStack SQL database access credentials

Parameter: keystoneDBUsername

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: keystoneDBPassword

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: keystoneDBHost

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: swiftDBName

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: swiftDBUsername

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: swiftDBPassword

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: swiftDBHost

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: heatDBName

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: heatDBUsername

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: heatDBPassword

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: heatDBHost

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: neutronDBName

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: neutronDBUsername

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: neutronDBPassword

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: neutronDBHost

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: troveDBName

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: troveDBUsername

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: troveDBPassword

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: troveDBHost

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: ceilometerDBName

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: ceilometerDBUsername

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: ceilometerDBPassword

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: ceilometerDBHost

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: ceilometerDBHost2

Type: string

Description: *none*

Parameter: ceilometerDBHost3

Type: string

Description: *none*

Parameter: saharaDBName

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: saharaDBUsername

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: saharaDBPassword

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: saharaDBHost

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: ironicDBName

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: ironicDBUsername

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: ironicDBPassword

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: ironicDBHost

Type: string

Description: Internal OpenStack SQL database access credentials

Parameter: extraString1

Type: string

Description: *none*

Parameter: extraString2

Type: string

Description: *none*

Parameter: extraString3

Type: string

Description: none

Parameter: extraString4

Type: string

Description: none

Parameter: extraString5

Type: string

Description: none

Parameter: extraString6

Type: string

Description: none

Parameter: extraString7

Type: string

Description: none

Parameter: extraString8

Type: string

Description: none

Parameter: extraString9

Type: string

Description: none

Parameter: extraString10

Type: string

Description: none

5.2.455 OpenStackSettingsLogging : Entity

parent : Entity

Parameter: defaultApiCallLogLevelRequest

Type: enum

Description: Log verbosity of HTTP requests from CMDaemon to OpenStack as logged in /var/spool/cmd/openstack.log

Parameter: defaultApiCallLogLevelReply

Type: enum

Description: Log verbosity of HTTP replies from OpenStack to CMDaemon as logged in /var/spool/cmd/openstack.log

Parameter: logTokens

Type: enum

Description: Under which conditions tokens should be logged in /var/spool/cmd/openstack.log

Parameter: maxContentToLog

Type: unsigned integer

Description: When logging HTTP traffic content to /var/spool/cmd/openstack.log, how many characters of content to include.

Parameter: maxTokenToLog

Type: unsigned integer

Description: When logging tokens to /var/spool/cmd/openstack.log, how many characters of token to include.

Parameter: debugApiCalls

Type: boolean

Description: Debug API calls from CMDaemon to OpenStack

Parameter: apiCallsToDebug

Type: list of strings

Description: Debug specific API calls made from CMDaemon to OpenStack

Parameter: centralizedLogging

Type: boolean

Description: *none*

Parameter: globalDebug

Type: boolean

Description: Whether to enable 'debug' mode for all OpenStack services. Warning, this will generate a huge volumes of logs.

Parameter: globalComputeDebug

Type: boolean

Description: Whether to enable 'debug' mode for all OpenStack Nova services. Warning, this will generate a huge volumes of logs.

Parameter: globalNetworkDebug

Type: boolean

Description: Whether to enable 'debug' mode for all OpenStack Neutron services. Warning, this will generate a huge volumes of logs.

Parameter: globalImageStorageDebug

Type: boolean

Description: Whether to enable 'debug' mode for all OpenStack Glance services. Warning, this will generate a huge volumes of logs.

Parameter: globalBlockStorageDebug

Type: boolean

Description: Whether to enable 'debug' mode for all OpenStack Cinder services. Warning, this will generate a huge volumes of logs.

Parameter: globalOrchestrationDebug

Type: boolean

Description: Whether to enable 'debug' mode for all OpenStack Heat services. Warning, this will generate a huge volumes of logs.

Parameter: globalAuthenticationDebug

Type: boolean

Description: Whether to enable 'debug' mode for all OpenStack Keystone services. Warning, this will generate a huge volumes of logs.

Parameter: globalDashboardDebug

Type: boolean

Description: Whether to enable 'debug' mode for all OpenStack Horizon services. Warning, this will generate a huge volumes of logs.

Parameter: globalDataProcessingDebug

Type: boolean

Description: *none*

Parameter: globalMeteringDebug

Type: boolean

Description: *none*

Parameter: globalBareMetalDebug

Type: boolean

Description: *none*

Parameter: extraBool1

Type: boolean

Description: *none*

Parameter: extraBool2

Type: boolean

Description: *none*

Parameter: extraBool3

Type: boolean

Description: *none*

Parameter: extraBool4

Type: boolean

Description: *none*

5.2.456 OpenStackSettingsNetworking: Entity

parent: Entity

Parameter: rescheduleNetworkResources

Type: boolean

Description: *none*

Parameter: 13HAEnabled

Type: tri-boolean

Description: Enable HA routers in the L3 agent.

Parameter: l3HAMinAgentsPerRouter

Type: unsigned integer

Description: Minimum number of L3 agents which a HA router will be scheduled on. If it is set to 0 then the router will be scheduled on every agent. (Used only when 'L3 HA enabled' is set.)

Parameter: l3HAMaxAgentsPerRouter

Type: unsigned integer

Description: Maximum number of L3 agents which a HA router will be scheduled on. If it is set to 0 then the router will be scheduled on every agent. (Used only when 'L3 HA enabled' is set.)

Parameter: DHCPAgentsPerNetwork

Type: unsigned integer

Description: Number of DHCP agents scheduled to host a tenant network. If this number is greater than 1, the scheduler automatically assigns multiple DHCP agents for a given tenant network, providing high availability for DHCP service.

Parameter: automaticL3AgentFailover

Type: tri-boolean

Description: Automatically reschedule routers from offline L3 agents to online L3 agents.

Parameter: routerAutoSchedule

Type: tri-boolean

Description: Allow auto scheduling of routers to L3 agent.

Parameter: networkAutoSchedule

Type: tri-boolean

Description: Allow auto scheduling networks to DHCP agent.

Parameter: VXLANGroupIP

Type: IP

Description: When configured, send broadcast traffic to this multicast group. When unconfigured (0.0.0.0), disables multicast VXLAN mode

Parameter: routerInternalNetworkIP

Type: IP

Description: IP address for the router on the internal network.

Parameter: L2Population

Type: boolean

Description: Enables population of the VXLAN forwarding table.

Parameter: enableFloatingIPs

Type: boolean

Description: Enable Floating IPs

Parameter: enableRouters

Type: boolean

Description: Enable routers. (Currently only affects Horizon.)

Parameter: enableDistributedRouters

Type: boolean

Description: Enable distributed virtual routers (DVR). When enabled only admin can create centralized routers.

Parameter: enableFirewalls

Type: boolean

Description: Enable firewall-as-a-service.

Parameter: enableLoadBalancers

Type: boolean

Description: Enable loadbalancer-as-a-service.

Parameter: enableVPNs

Type: boolean

Description: Enable VPN-as-a-service.

Parameter: enableTrunkPortPlugin

Type: boolean

Description: Allows for creating (nested) VLANs in OpenStack, i.e. connecting multiple OpenStack networks to a VM using a single virtual NIC.

Parameter: ML2TypeDrivers

Type: list of strings

Description: List of type drivers to enable in the ML2 plugin.

Parameter: ML2MechanismDrivers

Type: list of strings

Description: List of mechanism drivers to enable in the ML2 plugin.

Parameter: ML2EnablePortSecurityPlugin

Type: boolean

Description: Enable ML2 port security extension driver in the ML2 plugin.

Parameter: ML2TypeDriversBehaviour

Type: enum

Description: Determines if 'ML2 type drivers' settings should be appended to built-in type drivers, or should override them.

Parameter: ML2MechanismDriversBehaviour

Type: enum

Description: Determines if 'ML2 mechanism drivers' settings should be appended to built-in mechanism drivers, or should override them.

Parameter: extraBool1
Type: boolean
Description: Enable IPv6.

Parameter: extraBool2
Type: boolean
Description: *none*

Parameter: extraBool3
Type: boolean
Description: *none*

Parameter: extraBool4
Type: boolean
Description: *none*

5.2.457 OpenStackSettingsPorts : Entity

parent : Entity

Parameter: keystoneAuthAdminPort
Type: unsigned integer
Description: The default port

Parameter: keystoneAuthPublicPort
Type: unsigned integer
Description: The default port

Parameter: swiftEndpointPort
Type: unsigned integer
Description: The default port

Parameter: swiftObjectPort
Type: unsigned integer
Description: The default port

Parameter: swiftContainerPort
Type: unsigned integer
Description: The default port

Parameter: swiftAccountPort
Type: unsigned integer
Description: The default port

Parameter: glanceEndpointPort
Type: unsigned integer
Description: The default port

Parameter: cinderEndpointPort

Type: unsigned integer

Description: The default port

Parameter: heatEndpointPort

Type: unsigned integer

Description: The default port

Parameter: neutronEndpointPort

Type: unsigned integer

Description: The default port

Parameter: novaOSAPIEndpointPort

Type: unsigned integer

Description: The default port

Parameter: novaEC2APIEndpointPort

Type: unsigned integer

Description: The default port

Parameter: novaMetaAPIEndpointPort

Type: unsigned integer

Description: The default port

Parameter: novaNoVNCProxyPort

Type: unsigned integer

Description: The default port

Parameter: novaPlacementAPIEndpointPort

Type: unsigned integer

Description: The default port

Parameter: troveEndpointPort

Type: unsigned integer

Description: The default port

Parameter: AMQPPort

Type: unsigned integer

Description: The default port

Parameter: saharaEndpointPort

Type: unsigned integer

Description: The default port

Parameter: ceilometerEndpointPort

Type: unsigned integer

Description: The default port

Parameter: ironicEndpointPort

Type: unsigned integer

Description: The default port

Parameter: galeraEndpointPort

Type: unsigned integer

Description: The default port

Parameter: backendEndpointPortOffset

Type: unsigned integer

Description: *none*

Parameter: offsetEndpointPortsOnlyOnConflict

Type: boolean

Description: *none*

Parameter: extraInt1

Type: unsigned integer

Description: *none*

Parameter: extraInt2

Type: unsigned integer

Description: *none*

Parameter: extraInt3

Type: unsigned integer

Description: *none*

Parameter: extraInt4

Type: unsigned integer

Description: *none*

Parameter: extraInt5

Type: unsigned integer

Description: *none*

Parameter: extraInt6

Type: unsigned integer

Description: *none*

Parameter: extraInt7

Type: unsigned integer

Description: *none*

Parameter: extraInt8

Type: unsigned integer

Description: *none*

Parameter: extraInt9

Type: unsigned integer

Description: *none*

5.2.458 OpenStackSettingsQuota : Entity

parent : Entity

Parameter: makeStickyForNewTenants

Type: boolean

Description: Make the quotas sticky for new new tenants

Parameter: quotaInstances

Type: unsigned integer

Description: Default maximum number of VMs a project may have

Parameter: quotaVCPU

Type: unsigned integer

Description: Default maximum number of vCPUs which can be allocated by a project

Parameter: quotaRam

Type: unsigned integer

Description: Default maximum amount of memory which can be allocated by a project

Parameter: quotaInjectedFiles

Type: unsigned integer

Description: Default maximum number of injected files

Parameter: quotaInjectedFilesContentSize

Type: unsigned integer

Description: Default maximum size of the content of files injected to VMs

Parameter: quotaKeyPairs

Type: unsigned integer

Description: Default maximum number of key pair per project

Parameter: quotaMetadataItems

Type: unsigned integer

Description: Default maximum number of custom metadata items

Parameter: quotaServerGroups

Type: unsigned integer

Description: Default maximum number of server groups

Parameter: quotaServerGroupMembers

Type: unsigned integer

Description: Default maximum number of server group members

Parameter: quotaVolumes

Type: unsigned integer

Description: Default maximum number of volumes per project

Parameter: quotaVolumeSnapshots

Type: unsigned integer

Description: Default maximum number of volume snapshots per project

Parameter: quotaVolumesAndSnapshotsSize

Type: unsigned integer

Description: Default maximum size of all volumes and snapshots per project

Parameter: quotaBackups

Type: unsigned integer

Description: Default maximum number of volume backups per project

Parameter: quotaBackupsSize

Type: unsigned integer

Description: Default maximum size of all volume backups per project

Parameter: quotaConsistencyGroups

Type: unsigned integer

Description: Default maximum number of consistency groups

Parameter: quotaSecurityGroups

Type: unsigned integer

Description: Default maximum number of security groups per project

Parameter: quotaSecurityGroupRules

Type: unsigned integer

Description: Default maximum number of security rules per project

Parameter: quotaNetworks

Type: unsigned integer

Description: Default maximum number of networks per project

Parameter: quotaPorts

Type: unsigned integer

Description: Default maximum number of network ports per project

Parameter: quotaSubnets

Type: unsigned integer

Description: Default maximum number of subnets per project

Parameter: quotaFloatingIPs

Type: unsigned integer

Description: Default maximum number of floating IPs per project

Parameter: quotaRouters

Type: unsigned integer

Description: Default maximum number of routers per project

Parameter: quotaFirewalls

Type: unsigned integer

Description: Default maximum number of firewalls per project

Parameter: quotaFirewallPolicies

Type: unsigned integer

Description: Default maximum number of firewall policies per project

Parameter: quotaFirewallRules

Type: unsigned integer

Description: Default maximum number of firewall rules per project

Parameter: quotaPools

Type: unsigned integer

Description: Default maximum number of LB pools per project

Parameter: quotaVIPs

Type: unsigned integer

Description: Default maximum number of LB virtual IPs per project

Parameter: quotaImagesSize

Type: unsigned integer

Description: Default maximum size of images which can be uploaded per projects

Parameter: quotaMaxSingleImageSize

Type: unsigned integer

Description: Default maximum size of a individual image which can be uploaded

Parameter: quotaImageProperties

Type: unsigned integer

Description: Default maximum number of custom properties per image

Parameter: quotaImageTags

Type: unsigned integer

Description: Default maximum number of tags per image

Parameter: quotaImageMembers

Type: unsigned integer

Description: Default maximum number of projects a image can be shared with

Parameter: extraInt1

Type: unsigned integer

Description: *none*

Parameter: extraInt2

Type: unsigned integer

Description: *none*

Parameter: extraInt3

Type: unsigned integer

Description: *none*

Parameter: extraInt4

Type: unsigned integer

Description: *none*

Parameter: extraInt5

Type: unsigned integer

Description: *none*

Parameter: extraInt6

Type: unsigned integer

Description: *none*

5.2.459 `OpenStackSettings:VirtualNodeSettings`

parent: `VirtualNodeSettings`

Parameter: `instanceID`

Type: string

Description: Instance-ID assigned by OpenStack

Parameter: `name`

Type: string

Description: Instance-name

Parameter: `storage`

Type: list of `OpenStackStorage`

Description: Assign storage

Parameter: `availabilityZone`

Type: string

Description: AZ

Parameter: `region`

Type: string

Description: AZ

Parameter: `tenant`

Type: string

Description: Tenant name

Parameter: openStackFlavor

Type: reference to OpenStackApiFlavor or None

Description: OpenStack Flavor

Parameter: options

Type: string

Description: User defined options passed to OpenStack on instance creation

Parameter: openStackImage

Type: string

Description: OpenStack image ID used for Bright instances, it should be an iPXE image

Parameter: defaultHost

Type: reference to ComputeNode or None

Description: Default host for this instance

Parameter: extraBool

Type: boolean

Description: *none*

Parameter: extraStringList

Type: list of strings

Description: *none*

Parameter: extraKey

Type: unsigned integer

Description: *none*

5.2.460 OpenStackSettingsUserPortal : Entity

parent : Entity

Parameter: enabled

Type: boolean

Description: Whether the OpenStack overview should be included in the user portal. If this is set to false, no OpenStack-related information will be shown in the user portal.

Parameter: displayOverviewOnlyOpenStackUsers

Type: boolean

Description: Display overview only of open stack users

Parameter: displayEntityOverview

Type: boolean

Description: Display entity overview

Parameter: displayNodeOverview

Type: boolean

Description: Display node overview

Parameter: displayNumOfUsersInProject

Type: boolean

Description: Display number of users in project

Parameter: displayNamesOfOtherUsersInProject

Type: boolean

Description: Display names of users in project

Parameter: determineCloudStatusAutomatically

Type: boolean

Description: Determine whether the cloud is operational

Parameter: cloudStatus

Type: enum

Description: Determines the current status of the cloud reported to the users in the user portal

Parameter: cloudStatusText

Type: list of strings

Description: Custom string visible in the user portal which outlines the current of the cloud as reported by the user portal, e.g. a MOTD

Parameter: determineDashboardURLsAutomatically

Type: boolean

Description: Determine the URL to the horizon dashboard (shown in user portal) automatically

Parameter: dashboardURLs

Type: list of strings

Description: Custom list of URLs users can use to access the Horizon Dashboard via the user portal

Parameter: determineKeystoneURLsAutomatically

Type: boolean

Description: Determine keystone URLs automatically

Parameter: keystonePublicURL

Type: string

Description: Set a custom public URL here if determining the keystone URLs automatically is set to false.

Parameter: keystoneInternalURL

Type: string

Description: Set a custom internal URL here if determining the keystone URLs automatically is set to false.

5.2.461 OpenStackSettingsUsers : Entity

parent : Entity

Parameter: rcWriteOutMode

Type: enum

Description: Whether or not to write out `.openstackrc` files for user. And if so, whether to do it for all users on the system, or only for those which have a matching username in OpenStack.

Parameter: `writeOutPassword`

Type: boolean

Description: Whether to also write out `.openstackrc_passwrd` containing the password. This applies only to new users created via Bright's APIs (as OpenStack does not store the password string).

Parameter: `defaultUserRoleName`

Type: string

Description: Name of the default user role, needed by several OpenStack services

Parameter: `migrationScriptPath`

Type: string

Description: Path to a script that will be executed should user be added to ldap. Default one is `/cm/local/apps/cluster-tools/bin/cm-user-migration`

Parameter: `initScriptPath`

Type: string

Description: Path to a script that will be executed should user be added to OpenStack. Default one is `/cm/local/apps/cluster-tools/bin/cm-user-init`

Parameter: `extraBool1`

Type: boolean

Description: *none*

Parameter: `extraBool2`

Type: boolean

Description: *none*

Parameter: `extraBool3`

Type: boolean

Description: *none*

Parameter: `extraBool4`

Type: boolean

Description: *none*

Parameter: `extraString1`

Type: string

Description: *none*

Parameter: `extraString2`

Type: string

Description: *none*

Parameter: extraString3

Type: string

Description: *none*

Parameter: extraString4

Type: string

Description: *none*

Parameter: extraInt1

Type: integer

Description: *none*

Parameter: extraStringList1

Type: list of strings

Description: *none*

Parameter: extraStringList2

Type: list of strings

Description: *none*

Parameter: extraStringList3

Type: list of strings

Description: *none*

Parameter: extraStringList4

Type: list of strings

Description: *none*

5.2.462 OpenStackStorage : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: drive

Type: string

Description: Mount device as /dev/?

5.2.463 OpenStackTelemetryAgentCentralRole : Role

parent : Role

Parameter: extraStringList

Type: list of strings

Description: Reserved for future use

5.2.464 OpenStackTelemetryAgentComputeRole : Role

parent : Role

Parameter: workloadPartitioning

Type: boolean

Description: Reserved for future use.

Parameter: extraStringList

Type: list of strings

Description: Reserved for future use.

5.2.465 OpenStackTelemetryAgentIpmiRole : Role

parent : Role

Parameter: extraStringList

Type: list of strings

Description: Reserved for future use

5.2.466 OpenStackTelemetryAgentNotificationRole : Role

parent : Role

Parameter: extraStringList

Type: list of strings

Description: Reserved for future use.

5.2.467 OpenStackTelemetryAlarmEvaluatorRole : Role

parent : Role

Parameter: extraStringList

Type: list of strings

Description: Reserved for future use.

5.2.468 OpenStackTelemetryAlarmNotifierRole : Role

parent : Role

Parameter: extraStringList

Type: list of strings

Description: Reserved for future use.

5.2.469 OpenStackTelemetryApiRole : Role

parent : Role

Parameter: includeInHAProxy

Type: boolean

Description: Automatically include the nodes with this role in HAProxy configuration.

Parameter: frontendHAProxyNames

Type: list of strings

Description: If set to a name of HAProxy, automatically configure the nodes having this role only behind that particular HAProxy.

Parameter: isBackupEndpoint

Type: boolean

Description: Configure this API endpoint as a 'backup' backend in HAProxy (only used if primary backends are down).

Parameter: network

Type: reference to Network

Description: Network on which api listens.

Parameter: apiPort

Type: unsigned integer

Description: This field can be used to override the default port this service will listen on.

Parameter: extraStringList

Type: list of strings

Description: Reserved for future use

5.2.470 OpenStackTelemetryCollectorRole : Role

parent : Role

Parameter: network

Type: reference to Network

Description: Network on which api listens

Parameter: udpPort

Type: unsigned integer

Description: Non default UDP port

Parameter: extraStringList

Type: list of strings

Description: Reserved for future use

5.2.471 OpenStack : Entity

parent : Entity

Parameter: name

Type: string

Description: Name of the OpenStack instance.

Parameter: enabled

Type: boolean

Description: If disabled, it disables any CMDaemon interaction with the OpenStack deployment

Parameter: preventRemoval

Type: boolean

Description: If set, OpenStack deployment cannot be removed. Prevents accidental removals

Parameter: version

Type: string

Description: Version of OpenStack the instance is using.

Parameter: distribution

Type: string

Description: OpenStack distribution the instance is using.

Parameter: deploymentConfiguration

Type: string

Description: Configuration used for deploying this OpenStack instance

Parameter: imageForBrightInstances

Type: string

Description: OpenStack image UUID used for Bright managed instances

Parameter: defaultFlavor

Type: string

Description: Default flavor for Bright managed instances

Parameter: extraStringList

Type: list of strings

Description: *none*

Parameter: deploymentStage

Type: string

Description: *none*

Parameter: settings

Type: OpenStackSettingsCollection

Description: Submode containing OpenStack settings

5.2.472 OpenStackUserRole : Entity

parent : Entity

Parameter: name

Type: string

Description: OpenStack user role name

Parameter: roleUUID

Type: string

Description: OpenStack role UUID

Parameter: projectUUIDs

Type: list of strings

Description: OpenStack Project UUIDs with that role

5.2.473 OpenStackVolumeApiRole : Role

parent : Role

Parameter: includeInHAProxy

Type: boolean

Description: Automatically include the nodes with this role in HAProxy configuration.

Parameter: frontendHAProxyNames

Type: list of strings

Description: If set to a name of HAProxy, automatically configure the nodes having this role only behind that particular HAProxy.

Parameter: isBackupEndpoint

Type: boolean

Description: Configure this API endpoint as a 'backup' backend in HAProxy (only used if primary backends are down).

Parameter: network

Type: reference to Network

Description: Network on which API endpoints listens.

Parameter: apiPort

Type: unsigned integer

Description: This field can be used to override the default port this service will listen on.

Parameter: workers

Type: unsigned integer

Description: Number of worker threads.

Parameter: defaultVolumeTypeName

Type: string

Description: The name of the default volume type. If not set, new volumes will not have a volume type set, unless explicitly requested.

5.2.474 `OpenStackVolumeBackend3PAR : OpenStackVolumeBackend`

parent : `OpenStackVolumeBackend`

Parameter: driverType

Type: enum

Description: Driver type (iSCSI or FibreChannel)

Parameter: apiUrl

Type: string

Description: 3PAR WSAPI Server Url

Parameter: username

Type: string

Description: 3PAR Super user username

Parameter: password

Type: string

Description: 3PAR Super user password

Parameter: sanIP

Type: string

Description: IP address of SAN controller for SSH access to the array

Parameter: sanLogin

Type: string

Description: Username for SAN controller for SSH access to the array

Parameter: sanPassword

Type: string

Description: Password for SAN controller for SSH access to the array

Parameter: cpg

Type: list of strings

Description: List of the CPG(s) to use for volume creation

Parameter: cpgSnap

Type: string

Description: The CPG to use for Snapshots for volumes

Parameter: snapshotRetention

Type: unsigned integer

Description: The time in hours to retain a snapshot

Parameter: snapshotExpiration

Type: unsigned integer

Description: The time in hours when a snapshot expires and is deleted

Parameter: iscsiIps

Type: list of strings

Description: List of target iSCSI addresses to use

Parameter: iscsiChapEnabled

Type: boolean

Description: Enable CHAP authentication for iSCSI connections

Parameter: debug

Type: boolean

Description: Enable HTTP debugging to 3PAR

5.2.475 `OpenStackVolumeBackendCeph` : `OpenStackVolumeBackend`

parent : `OpenStackVolumeBackend`

Parameter: rbdPool

Type: string

Description: RADOS pool in which volumes are stored

Parameter: rbdFlattenVolumeFromSnapshot

Type: boolean

Description: Flatten volumes created from snapshots to remove dependency

Parameter: rbdMaxCloneDepth

Type: unsigned integer

Description: maximum number of nested clones that can be taken of a volume before enforcing a flatten prior to next clone. A value of zero disables cloning

Parameter: rbdUser

Type: string

Description: The RADOS client name for accessing rbd volumes

Parameter: rbdSecretUuid

Type: string

Description: The libvirt uuid of the secret for the rbd_uservolumes

Parameter: rbdCephConf

Type: string

Description: Path to the ceph configuration file to use

5.2.476 `OpenStackVolumeBackendDellStorageCenter` : `OpenStackVolumeBackend`

parent : `OpenStackVolumeBackend`

Parameter: driverType

Type: enum

Description: Driver type (iSCSI or FibreChannel)

Parameter: sanIP

Type: string

Description: IP address of Enterprise Manager

Parameter: sanLogin

Type: string

Description: Enterprise Manager user name

Parameter: sanPassword

Type: string

Description: Enterprise Manager password

Parameter: ssn

Type: unsigned integer

Description: Storage Center serial number to use

Parameter: apiPort

Type: unsigned integer

Description: Enterprise Manager API port

Parameter: serverFolder

Type: string

Description: Name of the server folder to use on the Storage Center

Parameter: volumeFolder

Type: string

Description: Name of the volume folder to use on the Storage Center

Parameter: iscsiIp

Type: string

Description: The Storage Center iSCSI IP address

Parameter: `iscsiPort`

Type: unsigned integer

Description: The Storage Center iSCSI port

5.2.477 `OpenStackVolumeBackendGPFS : OpenStackVolumeBackend`

parent : `OpenStackVolumeBackend`

Parameter: `imagesDir`

Type: string

Description: Path of the Image service repository in GPFS

Parameter: `imagesShareMode`

Type: enum

Description: Type of image copy to be used

Parameter: `maxCloneDepth`

Type: unsigned integer

Description: Upper limit on the number of indirections required to reach a specific block due to snapshots or clones

Parameter: `mountPointBase`

Type: string

Description: Path of the GPFS directory where Block Storage volume and snapshot files are stored

Parameter: `sparseVolumes`

Type: boolean

Description: Specifies that volumes are created as sparse files which initially consume no space

Parameter: `storagePool`

Type: string

Description: Storage pool that volumes are assigned to

5.2.478 `OpenStackVolumeBackendNetApp : OpenStackVolumeBackend`

parent : `OpenStackVolumeBackend`

Parameter: `storageFamily`

Type: enum

Description: Storage family.

Parameter: `storageProtocol`

Type: enum

Description: Storage protocol.

Parameter: `hostname`

Type: string

Description: Hostname of the NetApp server. The value of this option should be the IP address of either the cluster management LIF or the SVM management LIF

Parameter: port

Type: unsigned integer

Description: Port of the NetApp server

Parameter: transportType

Type: string

Description: Transport protocol for communicating with the storage system or proxy server

Parameter: login

Type: string

Description: Administrative user account name used to access the storage system or proxy server

Parameter: password

Type: string

Description: Password for the administrative user account

Parameter: vserver

Type: string

Description: The storage virtual machine (previously called a Vserver) name on the storage cluster on which provisioning of block storage volumes should occur

Parameter: allowMultiAttach

Type: boolean

Description: Allow operations that require multiple attachments to a volume

Parameter: hostType

Type: string

Description: Defines the type of operating system for all initiators that can access a LUN

Parameter: osType

Type: string

Description: Defines the type of operating system that will access a LUN exported from Data ONTAP

Parameter: spaceReservation

Type: boolean

Description: If enabled, LUNs are thick provisioned. If space reservation is disabled, storage space is allocated on demand

Parameter: poolNameSearchPattern

Type: string

Description: Regex used to restrict provisioning to the specified pools

Parameter: partnerBackend

Type: string

Description: The name of the config.conf stanza for a Data ONTAP (7-mode) HA partner

Parameter: webServicePath

Type: string

Description: The path to the E-Series proxy application on a proxy server

Parameter: controllerIps

Type: list of strings

Description: List of hostnames/ips of controllers to which the provisioning should be restricted

Parameter: saPassword

Type: string

Description: Password for the NetApp E-Series storage array

Parameter: sizeMultiplier

Type: float

Description: When creating volumes, the quantity to be multiplied to the requested OpenStack volume size to ensure enough space is available on the SVM

Parameter: nfsSharesConfig

Type: string

Description: Path to a file with NFS exports

Parameter: copyOffloadToolPath

Type: string

Description: The path of the NetApp copy offload tool binary

Parameter: cacheClean

Type: unsigned integer

Description: Percentage of available space for an NFS share below which a cache will be cleaned

Parameter: cacheCleanStop

Type: unsigned integer

Description: Percentage of available space for an NFS share, above which files not recently accessed will not be cleaned

Parameter: expiryMinutes

Type: unsigned integer

Description: Files that have not been accessed after this interval will be cleaned

Parameter: vfiler

Type: string

Description: vFiler unit on which provisioning of block storage volumes will be done

5.2.479 `OpenStackVolumeBackendNFS` : `OpenStackVolumeBackend`

parent : `OpenStackVolumeBackend`

Parameter: nfsDiskUtil

Type: string

Description: Using disk utility.

Parameter: nfsMountPointBase

Type: string

Description: Base dir containing mount points for nfs shares.

Parameter: nfsSparsedVolumes

Type: boolean

Description: Create volumes as sparsed files which take no space. If set to False volume is created as regular file.

Parameter: nfsSharesConfig

Type: string

Description: File with the list of available nfs shares.

Parameter: nfsShares

Type: list of strings

Description: List of available nfs shares.

5.2.480 `OpenStackVolumeBackendSolidFire : OpenStackVolumeBackend`

parent : `OpenStackVolumeBackend`

Parameter: sanIP

Type: string

Description: IP address of MVIP

Parameter: sanLogin

Type: string

Description: Username for MVIP

Parameter: sanPassword

Type: string

Description: Password for MVIP

Parameter: accountPrefix

Type: string

Description: Create SolidFire accounts with this prefix (string 'hostname' is special and will create a prefix using the cinder node hostname)

Parameter: templateAccountName

Type: string

Description: Account name on the SolidFire Cluster to use as owner of template/cache volumes

Parameter: allowTenantQoS

Type: boolean

Description: Allow tenants to specify QoS on create

Parameter: allowTemplateCaching

Type: boolean

Description: Create an internal cache of copy of images when a bootable volume is created to eliminate fetch from glance and qemu conversion on subsequent calls

Parameter: apiPort
Type: unsigned integer
Description: SolidFire API port

Parameter: emulate512
Type: boolean
Description: Set 512 byte emulation on volume creation

5.2.481 OpenStackVolumeBackend : Entity

parent : Entity
Parameter: name
Type: string
Description: Backend Name

Parameter: volumeDriver
Type: string
Description: Driver to use for volume creation

5.2.482 OpenStackVolumeBackupBackendCeph : OpenStackVolumeBackupBackend

parent : OpenStackVolumeBackupBackend
Parameter: backupCephUser
Type: string
Description: The Ceph user to connect with

Parameter: backupCephChunkSize
Type: unsigned integer
Description: The chunk size in bytes that a backup will be broken into before transfer to backup store

Parameter: backupCephPool
Type: string
Description: RADOS pool in which backups are stored

Parameter: backupCephStripeUnit
Type: unsigned integer
Description: RBD stripe unit to use when creating a backup image

Parameter: backupCephStripeCount
Type: unsigned integer
Description: RBD stripe count to use when creating a backup image

Parameter: restoreDiscardExcessBytes
Type: boolean
Description: If True, always discard excess bytes when restoring volumes

Parameter: backupDriver
Type: string
Description: Driver to use for backups

Parameter: backupCephConf

Type: string

Description: Path to the ceph configuration file to use

5.2.483 OpenStackVolumeBackupBackend : Entity

parent : Entity

Parameter: name

Type: string

Description: Backend name

5.2.484 OpenStackVolumeBackupRole : Role

parent : Role

Parameter: backupBackends

Type: list of OpenStackVolumeBackupBackend

Description: Using volume backup backends

5.2.485 OpenStackVolumeRole : Role

parent : Role

Parameter: glanceApiVersion

Type: string

Description: Version of Glance API to use

Parameter: volumeBackends

Type: list of OpenStackVolumeBackend

Description: Using volume storage backends

5.2.486 OpenStackVolumeSchedulerRole : Role

parent : Role

Parameter: volumeScheduleAttempts

Type: unsigned integer

Description: How many times Cinder scheduler should attempt to schedule a creation of a volume.

5.2.487 OpenvSwitchRole : Role

parent : Role

Parameter: extraString1

Type: string

Description: *none*

Parameter: extraString2

Type: string

Description: *none*

Parameter: extraString3

Type: string

Description: *none*

Parameter: extraString4

Type: string

Description: *none*

Parameter: extraInt1

Type: integer

Description: *none*

Parameter: extraStringList1

Type: list of strings

Description: *none*

Parameter: extraStringList2

Type: list of strings

Description: *none*

Parameter: extraStringList3

Type: list of strings

Description: *none*

Parameter: extraStringList4

Type: list of strings

Description: *none*

5.2.488 OsapiPortIP : Entity

parent : Entity

Parameter: IP

Type: string

Description: The IP address

Parameter: subnetUUID

Type: string

Description: The OpenStack subnet containig the port

5.2.489 OsapiSecurityGroupRule : OpenStackApiEntity

parent : OpenStackApiEntity

Parameter: direction

Type: enum

Description: Traffic direction impacted by the rule, ingress: towards the VM, egress: out of the VM

Parameter: etherType

Type: enum

Description: IP protocol version

Parameter: portRangeMin

Type: unsigned integer

Description: Port range start

Parameter: portRangeMax

Type: unsigned integer

Description: Port range end

Parameter: protocol

Type: string

Description: Custom string

Parameter: remoteGroupUUID

Type: string

Description: Optional remote security group impacted by this rule

Parameter: remoteIPPrefix

Type: string

Description: Remote CIDR impacted by this rule, e.g. 10.12.0.0/16

Parameter: projectUUID

Type: string

Description: Project owning this rule

5.2.490 OsapiStackResource : Entity

parent : Entity

Parameter: UUID

Type: string

Description: The UUID of the stack

Parameter: name

Type: string

Description: The name of the stack

Parameter: updatedAt

Type: string

Description: When was the last time the stack was updated

Parameter: status

Type: string

Description: Current state of the stack

Parameter: statusReason

Type: string

Description: Additional status text of the stack

Parameter: type

Type: string

Description: Type of the stack

5.2.491 OsapiSubnetAllocationPool : Entity

parent : Entity

Parameter: start

Type: IP

Description: The start of the IP range.

Parameter: end

Type: IP

Description: The end of the IP range.

5.2.492 OSCloudDisk : Entity

parent : Entity

Parameter: name

Type: string

Description: Name of the disk

Parameter: bootIndex

Type: integer

Description: Defines the order in which a hypervisor will try devices when attempting to boot the guest from storage. Setting a negative value indicates that the device should not be used for booting

Parameter: size

Type: unsigned integer

Description: Size of the disk

Parameter: diskBus

Type: string

Description: Hypervisor-specific details about disk bus type

Parameter: deviceType

Type: string

Description: Hypervisor-specific details about disk device type

Parameter: removeOnTermination

Type: boolean

Description: If true, the drive will be removed when the instance it is attached to gets terminated

5.2.493 OSCloudEphemeralDisk : OSCloudDisk

parent : OSCloudDisk

Parameter: format

Type: string

Description: Filesystem to format the disk

5.2.494 OSCloudExtension : Entity

parent : Entity

Parameter: name

Type: string

Description: User-defined name of the private cloud

Parameter: region

Type: reference to OSCloudRegion

Description: Region of the cluster extension

Parameter: network

Type: reference to Network

Description: Network associated with the extension

Parameter: floatingIpNetworkId

Type: string

Description: Floating IP Network UUID or name

Parameter: stackId

Type: string

Description: Heat stack ID

Parameter: defaultDirectorSecGroupId

Type: string

Description: Default security group ID/name for the cloud director

Parameter: defaultCnodeSecGroupId

Type: string

Description: Default security group ID/name for the cloud nodes

Parameter: extraField

Type: list of strings

Description: A list of various advanced options

5.2.495 OSCloudFlavor : CloudType

parent : CloudType

Parameter: id

Type: string

Description: The ID of the flavor

5.2.496 OSCloudProvider : CloudProvider

parent : CloudProvider

Parameter: cloudApiType

Type: string

Description: Cloud provider type

Parameter: authUrl

Type: string

Description: Keystone URL

Parameter: username

Type: string

Description: Username

Parameter: password

Type: string

Description: Password

Parameter: projectId

Type: string

Description: Project ID

Parameter: projectName

Type: string

Description: Project Name

Parameter: projectDomainId

Type: string

Description: Project Domain Id

Parameter: userDomainId

Type: string

Description: User Domain Id

Parameter: keyPairName

Type: string

Description: SSH Key Pair Name

Parameter: openStackVersion

Type: string

Description: OpenStack release version (e.g. 2015.1.3)

Parameter: openStackVersionName

Type: string

Description: OpenStack release codename (e.g. Kilo)

Parameter: extensions

Type: list of OSCloudExtension

Description: List of extensions

Parameter: defaultRegion

Type: reference to OSCloudRegion or None

Description: Default region to start instances

Parameter: defaultFlavor

Type: reference to OSCloudFlavor or None

Description: Default cloud node flavor

Parameter: defaultDirectorFlavor

Type: reference to OSCloudFlavor or None

Description: Default cloud director Flavor

Parameter: defaultImage

Type: string

Description: Default node-installer image, can be overridden in the OS disk

5.2.497 `OSCloudRegion : CloudRegion`

parent : CloudRegion

Parameter: id

Type: string

Description: The ID of the region

5.2.498 `OSCloudSettings : CloudSettings`

parent : CloudSettings

Parameter: instanceId

Type: string

Description: Unique ID of the instance in OpenStack (the UUID).

Parameter: secGroupId

Type: string

Description: Security group name/ID

Parameter: region

Type: reference to OSCloudRegion

Description: The region of the cloud the VM is located in.

Parameter: flavor

Type: reference to OSCloudFlavor

Description: Instance Flavor (the type of the VM).

Parameter: image

Type: string

Description: The name of the cloud image used for creating the VM.

Parameter: disks

Type: list of OSCloudDisk

Description: Definitions of storage devices of the VM.

Parameter: availabilityZone

Type: string

Description: Availability zone the VM is supposed to be created in. If left empty, the availability zone will be automatically assigned by the cloud.

5.2.499 `OSCloudSwapDisk : OSCloudDisk`

parent : OSCloudDisk

5.2.500 `OSCloudVolumeDisk : OSCloudDisk`

parent : OSCloudDisk

Parameter: imageId

Type: string

Description: Image ID to use as source for this disk

Parameter: snapshotId
Type: string
Description: Snapshot ID to use as source for this disk

Parameter: volumeId
Type: string
Description: Volume ID to use as source for this disk

5.2.501 OSServiceConfig:Entity

parent : Entity
Parameter: name
Type: string
Description: Name

Parameter: monitored
Type: boolean
Description: CMDaemon will periodically check if the service is running

Parameter: autostart
Type: boolean
Description: CMDaemon will restart a failed service

Parameter: runIf
Type: enum
Description: Only run this service in the specified state

Parameter: belongsToRole
Type: boolean
Description: Service is initialized as part of an assigned role

Parameter: addFromRole
Type: boolean
Description: *none*

Parameter: fromGenericRole
Type: boolean
Description: *none*

Parameter: roleKey
Type: unsigned integer
Description: *none*

Parameter: extraKey
Type: unsigned integer
Description: *none*

Parameter: internal

Type: boolean

Description: *none*

Parameter: serviceType

Type: unsigned integer

Description: *none*

Parameter: sicknessCheckScript

Type: string

Description: Script for sickness checking (no script means no sickness checks)

Parameter: sicknessCheckScriptTimeout

Type: unsigned integer

Description: Timeout after which the script is killed

Parameter: sicknessCheckInterval

Type: unsigned integer

Description: Sickness checks interval (rounded up to 30s monitoring interval)

Parameter: scriptTimeout

Type: integer

Description: Service operation timeout

5.2.502 OSService:Entity

parent: Entity

Parameter: refOSServiceConfigUniqueKey

Type: unsigned integer

Description: OSServiceConfig

Parameter: name

Type: string

Description: *none*

Parameter: status

Type: enum

Description: *none*

Parameter: refNodeUniqueKey

Type: unsigned integer

Description: Node

Parameter: isRealService

Type: boolean

Description: *none*

Parameter: sicknessMessage

Type: string

Description: *none*

5.2.503 Package : Entity

parent : Entity

Parameter: refNodeUniqueKey

Type: unsigned integer

Description: Node

Parameter: type

Type: enum

Description: Type of package manager

Parameter: name

Type: string

Description: Name

Parameter: version

Type: string

Description: Version

Parameter: release

Type: string

Description: Release

Parameter: arch

Type: string

Description: Version

Parameter: buildDate

Type: timestamp

Description: Build date

Parameter: installDate

Type: timestamp

Description: Install date

Parameter: size

Type: unsigned integer

Description: Size

Parameter: installed

Type: boolean

Description: Installed

5.2.504 Partition : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: clusterName

Type: string

Description: Cluster name

Parameter: primaryHeadNode

Type: reference to HeadNode

Description: Primary head node

Parameter: failover

Type: CMDaemonFailover

Description: Manage failover setup for this cluster

Parameter: timezone

Type: string

Description: Time zone

Parameter: adminEmail

Type: list of strings

Description: Administrator's email

Parameter: slaveName

Type: string

Description: Default prefix to identify nodes. eg node003 (basename = node)

Parameter: slaveDigits

Type: unsigned integer

Description: Number of digits used to identify nodes. eg node003 (digits = 3)

Parameter: nameServers

Type: list of strings

Description: Name servers

Parameter: nameServersFromDhcp

Type: list of strings

Description: Name servers provided by dhcp, edit the name servers property instead

Parameter: timeServers

Type: list of strings

Description: Time servers

Parameter: searchDomains

Type: list of strings

Description: Search domains

Parameter: externallyVisibleIp

Type: IP

Description: IP that external sites see when headnode connects

Parameter: externalNetwork

Type: reference to Network

Description: External network

Parameter: defaultCategory

Type: reference to Category

Description: Default category for new nodes

Parameter: archOS

Type: list of ArchOS

Description: Architecture operating system

Parameter: burnConfigs

Type: list of BurnConfig

Description: Burn configurations

Parameter: failoverGroups

Type: list of CMDaemonFailoverGroup

Description: Failover group configurations

Parameter: resourcePools

Type: list of ResourcePool

Description: Resource pools

Parameter: defaultBurnConfig

Type: element of burnConfigs

Description: Default burn configuration

Parameter: bmcSettings

Type: BMCSettings or None

Description: Configure the baseboard management controller settings

Parameter: snmpSettings

Type: SNMPSettings or None

Description: Configure the cluster wide SNMP settings

Parameter: managementNetwork

Type: reference to Network

Description: Determines what network should be used for management traffic.

Parameter: notes

Type: string

Description: Administrator notes

Parameter: provisioningNodeAutoUpdateTimeout

Type: unsigned integer

Description: Time, in seconds, when an image on a provisioning node is considered out of date and automatically updated when needed (0 to disable automatic updates)

Parameter: relayHost

Type: string

Description: Display the configured relay host

Parameter: ucsProfiles

Type: list of UCSInfo

Description: Pre-defined UCS Profiles

Parameter: noZeroConf

Type: boolean

Description: Add nozeroconf to network configuration

Parameter: proxySettings

Type: ProxySettings or None

Description: Configure the proxy server settings

Parameter: autosign

Type: enum

Description: Sign certificates for node installer request according to network settings.

5.2.505 PBSJobQueueStat : JobQueueStat

parent : JobQueueStat

Parameter: running

Type: unsigned integer

Description: Running jobs

Parameter: queued

Type: unsigned integer

Description: Queued jobs

Parameter: held

Type: unsigned integer

Description: Held jobs

Parameter: waiting

Type: unsigned integer

Description: Waiting jobs

5.2.506 PBSJobQueue : JobQueue

parent : JobQueue

Parameter: queueType

Type: enum

Description: Pbs Pro queue type

Parameter: fromRouteOnly

Type: boolean

Description: Receive jobs from route queues only

Parameter: routeHeldJobs

Type: boolean

Description: Specifies whether jobs in the held state can be routed from this queue

Parameter: routeWaitingJobs

Type: boolean

Description: Specifies whether jobs whose execution_time attribute value is in the future can be routed from this queue

Parameter: routeLifetime

Type: unsigned integer

Description: The maximum time a job is allowed to reside in a routing queue

Parameter: routeRetryTime

Type: unsigned integer

Description: Route retry time in routing queue

Parameter: routes

Type: list of strings

Description: Route of queue path (route_destination parameter in qmgr)

Parameter: defaultQueue

Type: boolean

Description: Specifies the queue which is to accept jobs when no queue is requested

Parameter: minWalltime

Type: string

Description: Minimum runtime of jobs running in a queue

Parameter: maxWalltime

Type: string

Description: Maximum runtime of jobs running in a queue

Parameter: defaultWalltime

Type: string

Description: Maximum runtime of jobs running in a queue

Parameter: maxQueued

Type: unsigned integer

Description: Maximum number allowed to reside in a queue at any given time (0 is the same as infinite)

Parameter: priority

Type: integer

Description: Priority of a queue against other queues of the same type [-1024; 1024]

Parameter: enabled

Type: boolean

Description: When true, a queue will accept new jobs; when false, a queue is disabled and will not accept jobs

Parameter: started

Type: boolean

Description: Jobs may be scheduled for execution from this queue; when false, a queue is considered stopped

Parameter: aclHostEnable

Type: boolean

Description: When true directs the server to use the acl_hosts access list for the named queue

5.2.507 PBSJob : Job

parent : Job

5.2.508 PbsProCgroupsSettings : WlmCgroupsSettings

parent : WlmCgroupsSettings

Parameter: jobCgroupTemplate

Type: string

Description: Template for job cgroup path (\$JOBID will be replaced by job id, while \$ESCAPE_JOBID will be replaced by systemd-escape of job id)

5.2.509 PbsProClientRole : PbsProRole

parent : PbsProRole

Parameter: slots

Type: unsigned integer

Description: Number of slots available on this node/category

Parameter: queues

Type: list of references to PbsProJobQueue

Description: Queues this node/nodes in this category belongs to

Parameter: allQueues

Type: boolean

Description: When set, the role will provide all available queues. (The queues property will then be ignored.)

Parameter: gpus

Type: unsigned integer

Description: Number of gpus

Parameter: gpuDevices

Type: list of strings

Description: /dev/* available to workload management

Parameter: properties

Type: list of strings

Description: Node properties (a 'pnames' node attribute)

Parameter: momSettings

Type: PbsProMomSettings

Description: Submode containing pbs_mom daemon settings

Parameter: commSettings

Type: PbsProCommSettings

Description: Submode containing pbs_comm settings

Parameter: nodeCustomizations

Type: list of WlmNodeCustomizationEntry

Description: PBS Pro node custom properties

5.2.510 PbsProCommSettings : Entity

parent : Entity

Parameter: commRouters

Type: list of strings

Description: Tells a pbs_comm where to find its fellow communication daemons (PBS_COMM_ROUTERS parameter in pbs.conf)

Parameter: commThreads

Type: unsigned integer

Description: Tells pbs_comm how many threads to start (PBS_COMM_THREADS parameter in pbs.conf)

Parameter: startComm

Type: boolean

Description: Configure pbs_com daemon start (PBS_START_COMM parameter in pbs.conf)

5.2.511 PbsProJobQueueStat : PBSJobQueueStat

parent : PBSJobQueueStat

5.2.512 PbsProJobQueue : PBSJobQueue

parent : PBSJobQueue

5.2.513 PbsProJob : PBSJob

parent : PBSJob

5.2.514 PbsProMomSettings : Entity

parent : Entity

Parameter: outputHostname

Type: string

Description: Host to which all job standard output and standard error are delivered (PBS_OUTPUT_HOST_NAME parameter in pbs.conf)

Parameter: leafRouters

Type: list of strings

Description: Location of endpoint's pbs_comm daemon (PBS_LEAF_ROUTERS parameter in pbs.conf)

Parameter: leafName

Type: string

Description: Leaf name (PBS_LEAF_NAME parameter in pbs.conf)

Parameter: leafManagementFqdn

Type: boolean

Description: Leaf name in pbs.conf is appended with FQDN from management network

Parameter: startMom

Type: boolean

Description: Configure pbs_mom daemon start (PBS_START_MOM parameter in pbs.conf)

Parameter: spool

Type: string

Description: PBS Pro mom spool directory

5.2.515 PbsProRole : Role

parent : Role

Parameter: wlmCluster

Type: reference to PbsProWlmCluster

Description: WLM cluster link to this WLM role

5.2.516 PbsProServerRole : PbsProRole

parent : PbsProRole

Parameter: externalServer

Type: boolean

Description: PBS Pro server daemons are running on some external machine

Parameter: commSettings

Type: PbsProCommSettings

Description: Submode containing pbs_comm settings

5.2.517 PbsProSubmitRole : Role

parent : Role

Parameter: pbsProWlmClusters

Type: list of references to PbsProWlmCluster

Description: List of PbsPro clusters which the role belongs to

5.2.518 PbsProWlmCluster : WlmCluster

parent : WlmCluster

Parameter: version

Type: string

Description: Major PBS Pro version

Parameter: placeholders

Type: list of JobQueuePlaceholder

Description: Job queue node placeholders mode

Parameter: cgroups

Type: PbsProCgroupsSettings

Description: Submode containing PBS Pro related cgroups settings

Parameter: enableJobHistory

Type: boolean

Description: Keep all job attribute information in PBS Pro

Parameter: jobHistoryDuration

Type: string

Description: Specifies the length of time that PBS will keep each job's history

Parameter: prefix

Type: string

Description: Pbs Pro installation directory

Parameter: spool

Type: string

Description: PBS Pro server spool directory

Parameter: subType

Type: enum

Description: PBS Pro subtype

5.2.519 PDUPort : Entity

parent : Entity

Parameter: pdu

Type: reference to PowerDistributionUnit

Description: Pointer to a power distribution unit

Parameter: prt

Type: unsigned integer

Description: Port number on the power distribution unit

5.2.520 PhysicalNode : ComputeNode

parent : ComputeNode

5.2.521 PingResult : Entity

parent : Entity

Parameter: source

Type: unsigned integer

Description: Source

Parameter: destination

Type: unsigned integer

Description: Destination

Parameter: result

Type: enum

Description: Result of the ping operation

Parameter: latency

Type: float

Description: Round trip latency

Parameter: sequenceId

Type: unsigned integer

Description: Sequence ID

5.2.522 PingStatisticsGlobalInformation : Entity

parent : Entity

Parameter: count

Type: unsigned integer

Description: *none*

Parameter: average

Type: float

Description: *none*

Parameter: minimum

Type: float

Description: *none*

Parameter: maximum

Type: float

Description: *none*

Parameter: uniformity

Type: float

Description: *none*

5.2.523 PingStatisticsPairInformation : Entity

parent : Entity

Parameter: source

Type: unsigned integer

Description: *none*

Parameter: destination

Type: unsigned integer

Description: *none*

Parameter: count

Type: unsigned integer

Description: *none*

Parameter: average

Type: float

Description: *none*

Parameter: minimum

Type: float

Description: *none*

Parameter: maximum

Type: float

Description: *none*

Parameter: uniformity

Type: float

Description: *none*

5.2.524 PingStatisticsSourceInformation : Entity

parent : Entity

Parameter: source

Type: unsigned integer

Description: *none*

Parameter: count

Type: unsigned integer

Description: *none*

Parameter: average

Type: float

Description: *none*

Parameter: minimum

Type: float

Description: *none*

Parameter: maximum

Type: float

Description: *none*

Parameter: uniformity

Type: float

Description: *none*

5.2.525 PingStatistics : Entity

parent : Entity

Parameter: totalOk

Type: unsigned integer

Description: Total number of pings that returned OK

Parameter: totalError
Type: unsigned integer
Description: Total number of pings that returned error

Parameter: totalFailed
Type: unsigned integer
Description: Total number of pings that returned failed

Parameter: totalTimeout
Type: unsigned integer
Description: Total number of pings that returned timeout

Parameter: totalNoAddress
Type: unsigned integer
Description: Total number of pings had no address

Parameter: totalUnreachable
Type: unsigned integer
Description: Total number of pings that returned unreachable

Parameter: total
Type: unsigned integer
Description: Total number of pings done

Parameter: pairInformation
Type: list of PingStatisticsPairInformation
Description: Ping pair information statistics

Parameter: sourceInformation
Type: list of PingStatisticsSourceInformation
Description: Ping source information statistics

Parameter: globalInformation
Type: PingStatisticsGlobalInformation
Description: Ping global information statistics

Parameter: results
Type: list of PingResult
Description: Raw ping results

5.2.526 PowerDistributionUnit : Device

parent : Device
Parameter: ip
Type: IP
Description: IP address

Parameter: network

Type: reference to Network or None

Description: Network to which this unit is connected

Parameter: model

Type: string

Description: PowerDistributionUnit model name

Parameter: ports

Type: integer

Description: Number of outlets

Parameter: banks

Type: integer

Description: Number of banks

Parameter: phases

Type: integer

Description: Number of phases

Parameter: snmpSettings

Type: SNMPSettings or None

Description: Configure the cluster wide SNMP settings

Parameter: firmware

Type: string

Description: Firmware revision

Parameter: controlScript

Type: string

Description: *none*

Parameter: controlScriptTimeout

Type: unsigned integer

Description: *none*

5.2.527 PowerOperationHistory : Entity

parent : Entity

Parameter: refDeviceUniqueKey

Type: unsigned integer

Description: Device

Parameter: executionTime

Type: unsigned integer

Description: Execution time in milliseconds after epoch

Parameter: operation

Type: enum

Description: Operation

Parameter: success

Type: boolean

Description: Success

5.2.528 PowerOperationStatus : Entity

parent : Entity

Parameter: state

Type: enum

Description: State of the operation

Parameter: operation

Type: enum

Description: Operation to be performed

Parameter: executionTime

Type: timestamp

Description: Execution time

Parameter: info

Type: string

Description: Extra information about the power operation

Parameter: retries

Type: unsigned integer

Description: Number of retries

Parameter: devices

Type: list of unsigned numbers

Description: Devices

Parameter: index

Type: list of unsigned numbers

Description: Indexes of power operation

Parameter: gpus

Type: list of unsigned numbers

Description: GPUs

5.2.529 PowerOperation : Entity

parent : Entity

Parameter: devices

Type: list of unsigned numbers

Description: Devices

Parameter: pduPorts

Type: list of unsigned numbers

Description: A list of (PDU, port) pairs

Parameter: `sessionId`

Type: unsigned integer

Description: Session id

Parameter: `force`

Type: boolean

Description: Set to true to also do power operation on closed devices

Parameter: `delay`

Type: unsigned integer

Description: Delay between sequential operations in milliseconds

Parameter: `deviceDelay`

Type: list of unsigned numbers

Description: Individual device delay in milliseconds

Parameter: `headIndex`

Type: unsigned integer

Description: Should be 0

Parameter: `operation`

Type: enum

Description: Operation to be performed

Parameter: `gpus`

Type: list of unsigned numbers

Description: GPUs

Parameter: `retryCount`

Type: unsigned integer

Description: Number of times to retry on failure

Parameter: `retryDelay`

Type: unsigned integer

Description: Delay between consecutive tries in milliseconds

5.2.530 `PowerStatus` : Entity

parent : Entity

Parameter: `device`

Type: unsigned integer

Description: Device

Parameter: `host`

Type: unsigned integer

Description: *none*

Parameter: powerDistributionUnit

Type: unsigned integer

Description: *none*

Parameter: gpu

Type: integer

Description: *none*

Parameter: prt

Type: unsigned integer

Description: *none*

Parameter: name

Type: string

Description: *none*

Parameter: state

Type: enum

Description: *none*

Parameter: msg

Type: string

Description: *none*

Parameter: extendedMsg

Type: string

Description: *none*

Parameter: indexes

Type: list of unsigned numbers

Description: *none*

Parameter: tracker

Type: unsigned integer

Description: *none*

Parameter: retries

Type: unsigned integer

Description: *none*

5.2.531 PreJobOutput : Entity

parent : Entity

Parameter: measurable

Type: unsigned integer

Description: *none*

Parameter: value

Type: float

Description: *none*

Parameter: output

Type: string

Description: *none*

Parameter: failed

Type: boolean

Description: *none*

Parameter: reschedule

Type: boolean

Description: *none*

5.2.532 PreJobResult : Entity

parent : Entity

Parameter: hostname

Type: string

Description: *none*

Parameter: nodeKey

Type: unsigned integer

Description: *none*

Parameter: output

Type: list of PreJobOutput

Description: *none*

5.2.533 Processor : Entity

parent : Entity

Parameter: vendor

Type: string

Description: Vendor

Parameter: family

Type: string

Description: Family

Parameter: model

Type: string

Description: Model

Parameter: modelName

Type: string

Description: Model name

Parameter: cores

Type: integer

Description: Cores

Parameter: ID

Type: unsigned integer

Description: ID

Parameter: coreID

Type: unsigned integer

Description: Core ID

Parameter: IDLevel

Type: string

Description: ID level

Parameter: stepping

Type: unsigned integer

Description: Stepping

Parameter: speed

Type: string

Description: Speed

Parameter: cacheSize

Type: string

Description: Cache size

Parameter: cacheAlignment

Type: string

Description: Cache alignment

Parameter: flags

Type: string

Description: Flags

Parameter: bogomips

Type: string

Description: Bogomips

Parameter: TLBSize

Type: string

Description: TLB size

Parameter: addressSizes

Type: string

Description: Address sizes

Parameter: powerManagement
Type: string
Description: Power management

Parameter: FPU
Type: boolean
Description: FPU

Parameter: FPUException
Type: boolean
Description: FPU exception

Parameter: wp
Type: boolean
Description: WP

Parameter: availableGovernors
Type: list of strings
Description: Available governors

Parameter: currentGovernor
Type: string
Description: Current governor

5.2.534 Process:Entity

parent: Entity
Parameter: refNodeUniqueKey
Type: unsigned integer
Description: Node

Parameter: pid
Type: integer
Description: Process ID

Parameter: ppid
Type: integer
Description: Parent PID

Parameter: uid
Type: integer
Description: Owner UID

Parameter: gid
Type: integer
Description: Process' group ID

Parameter: state

Type: string
Description: Process' state

Parameter: cmd
Type: string
Description: The command name

Parameter: size
Type: unsigned integer
Description: Virtual memory size(KB)

Parameter: rss
Type: unsigned integer
Description: Resident memory size

Parameter: nbthreads
Type: integer
Description: Number of threads spawned

Parameter: nbfiledescs
Type: integer
Description: Number of held file descriptors

Parameter: cputime
Type: unsigned integer
Description: CPU time

Parameter: cpuuse
Type: float
Description: CPU percentage use

Parameter: username
Type: string
Description: Owner name

Parameter: groupname
Type: string
Description: Group name

5.2.535 Profile:Entity

parent: Entity
Parameter: name
Type: string
Description: Name

Parameter: tokens
Type: list of strings

Description: Tokens

Parameter: accessServices

Type: list of strings

Description: Services

Parameter: nonuser

Type: boolean

Description: True if profile not assignable to users.

5.2.536 ProgramRunnerInput : Entity

parent : Entity

Parameter: user

Type: string

Description: *none*

Parameter: startInShell

Type: boolean

Description: *none*

Parameter: cmd

Type: string

Description: *none*

Parameter: info

Type: string

Description: *none*

Parameter: args

Type: list of strings

Description: *none*

Parameter: env

Type: list of strings

Description: *none*

Parameter: datacin

Type: string

Description: *none*

Parameter: mergeCoutCerr

Type: boolean

Description: *none*

Parameter: maxruntime

Type: unsigned integer

Description: *none*

Parameter: updateinterval

Type: unsigned integer

Description: *none*

Parameter: priority

Type: integer

Description: *none*

Parameter: tracker

Type: unsigned integer

Description: *none*

Parameter: logger

Type: enum

Description: *none*

5.2.537 ProgramRunnerKill : Entity

parent : Entity

Parameter: node

Type: unsigned integer

Description: Node key

Parameter: running

Type: integer

Description: Running

Parameter: trackers

Type: list of unsigned numbers

Description: Trackers

Parameter: results

Type: list of signed numbers

Description: results

5.2.538 ProgramRunnerOutput : Entity

parent : Entity

Parameter: node

Type: unsigned integer

Description: *none*

Parameter: datacout

Type: string

Description: *none*

Parameter: datacerr

Type: string

Description: *none*

Parameter: exitcode

Type: integer

Description: none

Parameter: signal

Type: integer

Description: none

Parameter: pid

Type: integer

Description: none

Parameter: runtime

Type: unsigned integer

Description: none

Parameter: state

Type: unsigned integer

Description: none

5.2.539 ProgramRunnerStatus : Entity

parent : Entity

Parameter: startTime

Type: timestamp

Description: none

Parameter: runtime

Type: unsigned integer

Description: none

Parameter: sid

Type: unsigned integer

Description: none

Parameter: running

Type: integer

Description: none

Parameter: unknown

Type: integer

Description: none

Parameter: internal

Type: boolean

Description: none

Parameter: nodes

Type: list of unsigned numbers

Description: *none*

Parameter: state

Type: list of unsigned numbers

Description: *none*

Parameter: input

Type: ProgramRunnerInput

Description: *none*

5.2.540 ProjectManager:Entity

parent : Entity

Parameter: users

Type: list of strings

Description: List of users managed

Parameter: accounts

Type: list of strings

Description: List of accounts managed

Parameter: op

Type: enum

Description: Job needs to belong to one of the users and/or accounts

5.2.541 PrometheusQueryDrilldown:Entity

parent : Entity

Parameter: name

Type: string

Description: The name of the drill down

Parameter: parameters

Type: list of strings

Description: Parameters to be passed to the drill down query

Parameter: query

Type: reference to PrometheusQuery or None

Description: Query to execute

5.2.542 PrometheusQuery:Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: query

Type: string

Description: PromQL Query

Parameter: typeClass

Type: string

Description: Type class, slash(/) separated for levels

Parameter: description

Type: string

Description: Description

Parameter: notes

Type: string

Description: Notes

Parameter: startTime

Type: string

Description: Default query start time

Parameter: endTime

Type: string

Description: Default end start time

Parameter: interval

Type: float

Description: Interval

Parameter: stalenessDelay

Type: float

Description: Staleness delay

Parameter: access

Type: enum

Description: User access control

Parameter: unit

Type: string

Description: Unit of measure for the query results

Parameter: drilldown

Type: list of PrometheusQueryDrilldown

Description: Manage the drilldown queries

5.2.543 PrometheusRecordingRule : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: sourceLabels

Type: list of strings

Description: Source labels to be translated into target

Parameter: targetLabel

Type: string

Description: Target label

Parameter: valueRegex

Type: string

Description: Regex the value must match for this rule to be applied

Parameter: valueReplace

Type: string

Description: Replace value with regex replace (use \$1 for matchers)

Parameter: disabled

Type: boolean

Description: Disable this rule

Parameter: keepOriginalLabels

Type: boolean

Description: Keep original labels

5.2.544 ProvisioningNodeStatus : Entity

parent : Entity

Parameter: slotsCapacity

Type: unsigned integer

Description: Number of provisioning requests this node can handle in parallel.

Parameter: slotsUsed

Type: unsigned integer

Description: Number of provisioning requests currently being handled by this node.

Parameter: nodeKey

Type: unsigned integer

Description: The provisioning node.

Parameter: drained

Type: boolean

Description: Drained and not available for future request

Parameter: imageKeys

Type: list of unsigned numbers

Description: none

Parameter: upToDate

Type: list of booleans

Description: *none*

Parameter: `nodeGroupKeys`

Type: list of unsigned numbers

Description: Node groups this provisioning node will provide images for.

Parameter: `categoryKeys`

Type: list of unsigned numbers

Description: Categories this provisioning node will provide images for.

Parameter: `rackKeys`

Type: list of unsigned numbers

Description: Racks this provisioning node will provide images for.

5.2.545 `ProvisioningProcessorJob` : Entity

parent : Entity

Parameter: `jobID`

Type: unsigned integer

Description: Internal provisioning system job ID.

Parameter: `requestID`

Type: unsigned integer

Description: Provisioning request ID.

Parameter: `source`

Type: reference to Node

Description: Source node.

Parameter: `sourcePath`

Type: string

Description: Path on the source node.

Parameter: `destination`

Type: reference to Node

Description: Destination node.

Parameter: `destinationPath`

Type: string

Description: Path on the destination node.

Parameter: `isFromNodeInstaller`

Type: boolean

Description: Set if the request came from the node-installer.

Parameter: `userName`

Type: string

Description: Rsync username.

Parameter: password

Type: string

Description: Rsync password.

Parameter: rsyncdPort

Type: unsigned integer

Description: Rsync port.

Parameter: includelist

Type: string

Description: Rsync include list.

Parameter: excludelist

Type: string

Description: Rsync exclude list.

Parameter: dryrun

Type: boolean

Description: If set, a dry run will be performed, no data is written.

Parameter: syncMode

Type: unsigned integer

Description: Sync mode.

Parameter: state

Type: unsigned integer

Description: Job state.

Parameter: errorMessage

Type: string

Description: Error message.

Parameter: errorDetails

Type: string

Description: Error details.

Parameter: fspart

Type: reference to FSPart

Description: FSPart

5.2.546 ProvisioningRequestStatus : Entity

parent : Entity

Parameter: requestIDs

Type: list of unsigned numbers

Description: Provisioning request IDs.

Parameter: `sourceNodeKey`
Type: unsigned integer
Description: Source node handling the provisioning request.

Parameter: `sourcePath`
Type: string
Description: Path on the source node.

Parameter: `destinationNodeKey`
Type: unsigned integer
Description: Destination node for the provisioning request.

Parameter: `destinationPath`
Type: string
Description: Path on the destination node.

Parameter: `dryRun`
Type: boolean
Description: In dry-run mode no data is actually written. See provisioning log for results.

Parameter: `syncMode`
Type: unsigned integer
Description: Sync mode used for the provisioning request.

Parameter: `state`
Type: unsigned integer
Description: State of the provisioning request.

Parameter: `errorMessage`
Type: string
Description: Error message.

Parameter: `errorDetails`
Type: string
Description: Detailed error message.

Parameter: `jobFailureCounter`
Type: unsigned integer
Description: Number of times the provisioning job has failed.

Parameter: `isFromNodeInstaller`
Type: boolean
Description: Set if the request came from the node-installer.

Parameter: `requesterSessions`
Type: list of unsigned numbers

Description: *none*

Parameter: schedulerInfo

Type: list of strings

Description: Details on how the provisioning request was scheduled.

5.2.547 ProvisioningRole : Role

parent : Role

Parameter: maxProvisioningNodes

Type: unsigned integer

Description: Maximum number of nodes that can be provisioned in parallel

Parameter: localImages

Type: list of references to SoftwareImage

Description: List of software images provided from local disk

Parameter: includeRevisionsOfLocalImages

Type: boolean

Description: Include revisions of local images

Parameter: sharedImages

Type: list of references to SoftwareImage

Description: List of software images provided from shared storage

Parameter: allImages

Type: enum

Description: When set, the role will provide all available images. (The images property will then be ignored.)

Parameter: nodegroups

Type: list of references to NodeGroup

Description: List of node groups for which to provide images

Parameter: categories

Type: list of references to Category

Description: List of categories for which to provide images

Parameter: racks

Type: list of references to Rack

Description: List of racks for which to provide images

Parameter: localProvisioning

Type: boolean

Description: Speeds up initial provisioning of cloud directors and cloud provisioning nodes. When enabled, if a software image is used as the rootfs of the provisioning node and is also to be used by that node to provision other cloud nodes, during the initial FULL install that image will be transferred only once to the provisioning node, instead of twice.

5.2.548 ProvisioningStatus : Entity**parent :** Entity**Parameter:** provisioningRequestStatusList**Type:** list of ProvisioningRequestStatus**Description:** *none***Parameter:** provisioningNodeStatusList**Type:** list of ProvisioningNodeStatus**Description:** *none***5.2.549** ProxySettings : Entity**parent :** Entity**Parameter:** proxyHttp**Type:** string**Description:** HTTP proxy address which will be used for the node connections to HTTP resources**Parameter:** proxyHttpUser**Type:** string**Description:** HTTP proxy username for authentication**Parameter:** proxyHttpPass**Type:** string**Description:** HTTP proxy password for authentication**Parameter:** proxyHttps**Type:** string**Description:** HTTPS proxy address which will be used for the node connections to HTTPS resources**Parameter:** proxyHttpsUser**Type:** string**Description:** HTTPS proxy username for authentication**Parameter:** proxyHttpsPass**Type:** string**Description:** HTTPS proxy password for authentication**Parameter:** proxyFtp**Type:** string**Description:** FTP proxy address which will be used for the node connections to FTP resources**Parameter:** proxyFtpUser**Type:** string**Description:** FTP proxy username for authentication**Parameter:** proxyFtpPass**Type:** string

Description: FTP proxy password for authentication

Parameter: noProxy

Type: list of strings

Description: Hosts to be accessed without proxy

5.2.550 RackPosition : Entity

parent : Entity

Parameter: rack

Type: reference to Rack

Description: Name of the rack in which the device resides

Parameter: position

Type: unsigned integer

Description: Position of the node in the rack, top is 1

Parameter: height

Type: unsigned integer

Description: Height of the node

5.2.551 RackSensor : Device

parent : Device

Parameter: ip

Type: IP

Description: Ip address

Parameter: network

Type: reference to Network or None

Description: Network to which this switch is connected

Parameter: model

Type: string

Description: RackSensor model name

Parameter: sensors

Type: list of Sensor

Description: Sensors in the rackmon kit

Parameter: snmpSettings

Type: SNMPSettings or None

Description: Configure the cluster wide SNMP settings

5.2.552 Rack : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: room

Type: string

Description: Name of the room

Parameter: xCoordinate

Type: unsigned integer

Description: Position in the room

Parameter: yCoordinate

Type: unsigned integer

Description: Position in the room

Parameter: height

Type: unsigned integer

Description: Height

Parameter: width

Type: unsigned integer

Description: Width

Parameter: depth

Type: unsigned integer

Description: Depth

Parameter: angle

Type: unsigned integer

Description: Angle of the rack, 90 face right, 180 face backwards, 270 face left

Parameter: inverted

Type: boolean

Description: Inverted racks have position 1 at the bottom

Parameter: notes

Type: string

Description: Administrator notes

5.2.553 RadosGatewayRole : Role

parent : Role

Parameter: serverRoot

Type: string

Description: Fast CGI server root path

Parameter: serverSocket

Type: string

Description: Fast CGI server socket

Parameter: serverPort

Type: unsigned integer

Description: Gateway port

Parameter: serverScript

Type: string

Description: Fast CGI server script content

Parameter: module

Type: string

Description: Apache fastcgi module file name

Parameter: enableKeystoneAuthentication

Type: boolean

Description: Indicates if RadosGW will be able to authenticate via Keystone tokens

Parameter: keystoneAcceptedRoles

Type: list of strings

Description: Accepted by RadosGW OpenStack user roles

Parameter: keystoneTokensCacheSize

Type: unsigned integer

Description: When the Ceph Object Gateway gets the ticket, it looks at the tenant, and the user roles that are assigned to that ticket, and accepts/rejects the request according to the rgw keystone accepted roles configurable.

Parameter: keystoneRevocationInterval

Type: unsigned integer

Description: Keystone tokens revocation interval

Parameter: nssDbPath

Type: string

Description: Path to NSS database directory

5.2.554 RemoteNodeInstallerInteraction : Entity

parent : Entity

Parameter: node

Type: reference to ComputeNode

Description: The node requesting interaction.

Parameter: description

Type: string

Description: The description of the interaction.

Parameter: firstSeen

Type: integer

Description: The first time this interaction was requested.

Parameter: lastSeen

Type: integer

Description: The last time this interaction was requested.

Parameter: appeared

Type: string

Description: The first time this interaction was requested.

Parameter: wasConfirmed

Type: boolean

Description: Whether the interaction has been confirmed.

Parameter: wasDenied

Type: boolean

Description: Whether the interaction has been denied (rejected).

Parameter: invalid

Type: boolean

Description: Whether the interaction was found to be invalid.

5.2.555 RemoteSetupExecution : Entity

parent : Entity

Parameter: id

Type: integer

Description: A unique identified of the remote cm-*-setup execution.

Parameter: inputConfig

Type: string

Description: cm-*-setup yaml input configuration file (used with '-c' flag).

Parameter: exitCode

Type: integer

Description: The return exit code from cm-setup (once the execution has been completed).

Parameter: signal

Type: integer

Description: Number identifying the signal which interrupted the execution.

Parameter: datacout

Type: list of strings

Description: Data which was emitted on stdout from cm-*-setup.

5.2.556 ResourcePoolStatus : Entity

parent : Entity

Parameter: nodes

Type: list of unsigned numbers

Description: Nodes

Parameter: nodeStatus

Type: list of unsigned numbers

Description: Node status

Parameter: resourceKeys

Type: list of unsigned numbers

Description: Resource key

Parameter: resourceStatus

Type: list of unsigned numbers

Description: Resource status

Parameter: resourceMessages

Type: list of strings

Description: Resource message

5.2.557 ResourcePool : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: nodes

Type: list of references to Node

Description: List of nodes who share the resources

Parameter: configurationOverlay

Type: reference to ConfigurationOverlay

Description: Configuration overlay which defines the nodes that share the resources

Parameter: priority

Type: list of floating point numbers

Description: Distribution priorities for the nodes

Parameter: hostname

Type: string

Description: Hostname all IP resources will point to

Parameter: resources

Type: list of BasicResource

Description: Resources to be divided among the given nodes

Parameter: waitTime

Type: unsigned integer

Description: How long to wait after a node goes down before migrating it's resources

Parameter: disabled

Type: boolean

Description: Disabled the entire resource pool

Parameter: generateDNSZone

Type: enum

Description: Specify which DNS zones should be written

5.2.558 Role:Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: addServices

Type: boolean

Description: Add services to nodes which belong to this node. Be careful setting this to false.

Parameter: fspartAssociations

Type: list of FSPartAssociation

Description: Provisioning associations linked to this role

5.2.559 Route:Entity

parent : Entity

Parameter: refNodeUniqueKey

Type: unsigned integer

Description: Node

Parameter: destination

Type: IP

Description: The destination network or destination host.

Parameter: gateway

Type: IP

Description: Gateway

Parameter: netmask

Type: IP

Description: The netmask for the destination

Parameter: flags

Type: string

Description: Flags

Parameter: metric

Type: unsigned integer

Description: The 'distance' to the target (usually counted in hops)

Parameter: ref

Type: unsigned integer

Description: Number of references to this route

Parameter: use

Type: unsigned integer

Description: Number of lookups for the route

Parameter: interface

Type: string

Description: *none*

5.2.560 ScaleAdvancedSettings : Entity

parent : Entity

Parameter: debug2

Type: boolean

Description: Print very low level debug messages to the log

Parameter: maxThreads

Type: unsigned integer

Description: Maximum number of threads for sequential operations

Parameter: powerOperationTimeout

Type: unsigned integer

Description: Power Operation Timeout (in seconds)

Parameter: connectionRetryInterval

Type: unsigned integer

Description: Connection to CMDaemon retry interval (in seconds)

Parameter: logFile

Type: string

Description: Path to cm-scale logs file

Parameter: pinQueues

Type: boolean

Description: Pin workload to its queue nodes

Parameter: mixLocations

Type: boolean

Description: Allow to map workload to different locations (for example, cloud and local)

Parameter: failedNodeIsHealthy

Type: boolean

Description: Do not start a new node instead of a failed one

Parameter: azureDiskAccountNodes

Type: unsigned integer

Description: Number of nodes that can share the same Azure disk account

Parameter: azureDiskImageName

Type: string

Description: Image name for Azure disks

Parameter: azureDiskContainerName

Type: string

Description: Container name for Azure disks

Parameter: azureDiskAccountPrefix

Type: string

Description: Prefix for randomly generated Azure disk account names

Parameter: options

Type: list of strings

Description: Additional parameters that will be passed to cm-scale daemon

5.2.561 ScaleDynamicNodesProvider : ScaleResourceProvider

parent : ScaleResourceProvider

Parameter: templateNode

Type: reference to Node

Description: Template node

Parameter: nodeRange

Type: string

Description: Node range

Parameter: networkInterface

Type: string

Description: Which node network interface will be changed on cloning (incremented)

Parameter: startTemplateNode

Type: boolean

Description: Should template node be started automatically

Parameter: stopTemplateNode

Type: boolean

Description: Should template node be stopped automatically

Parameter: removeNodes

Type: boolean

Description: Should nodes be removed from Bright Cluster Manager configuration upon the node termination

Parameter: leaveFailedNodes

Type: boolean

Description: Failed nodes will not be touched in order to allow administrator to investigate why they were failed

Parameter: neverTerminate

Type: unsigned integer

Description: Number of nodes that cm-scale powers off and allows to remain, instead of terminating

5.2.562 ScaleEngine : Entity

parent : Entity

Parameter: name

Type: string

Description: HPC workload engine name

Parameter: trackers

Type: list of ScaleTracker

Description: Workload trackers

Parameter: workloadsPerNode

Type: unsigned integer

Description: Number of workloads that can be scheduled to the same node at the same time

Parameter: priority

Type: unsigned integer

Description: Workload engine priority

Parameter: ageFactor

Type: float

Description: Fairsharing coefficient for workload age significance

Parameter: engineFactor

Type: float

Description: Fairsharing coefficient for engine priority significance

Parameter: maxNodes

Type: unsigned integer

Description: Allowed running nodes limit

Parameter: notes

Type: string

Description: Engine related notes

Parameter: options

Type: list of strings

Description: Additional engine related parameters that will be passed to cm-scale daemon

5.2.563 ScaleGenericEngine : ScaleEngine

parent : ScaleEngine

5.2.564 ScaleGenericTracker : ScaleTracker

parent : ScaleTracker

Parameter: handler

Type: string

Description: Full path to python module that produces workload entities for cm-scale

5.2.565 ScaleHpcEngine : ScaleEngine

parent : ScaleEngine

Parameter: wlmCluster

Type: reference to WlmCluster

Description: WLM cluster that will be used by cm-scale

5.2.566 ScaleHpcQueueTracker : ScaleTracker

parent : ScaleTracker

Parameter: queue

Type: string

Description: Tracking job queue

5.2.567 ScaleKubeEngine : ScaleEngine

parent : ScaleEngine

Parameter: cluster

Type: reference to KubeCluster

Description: Kubernetes cluster which pods will be tracked

Parameter: cpuBusyThreshold

Type: float

Description: CPU load % that defines if node is too busy for new pods

Parameter: memoryBusyThreshold

Type: float

Description: Memory load % that defines if node is too busy for new pods

5.2.568 ScaleKubeNamespaceTracker : ScaleTracker

parent : ScaleTracker

Parameter: controllerNamespace

Type: string

Description: Tracking Kubernetes namespace name

Parameter: object

Type: enum

Description: Type of Kubernetes objects to track

5.2.569 ScalePendingWorkload : Entity

parent : Entity

Parameter: workloadId

Type: string

Description: Workload that waits for nodes

Parameter: nodes

Type: list of references to Node

Description: List of managed nodes

5.2.570 ScaleResourceProvider : Entity**parent :** Entity**Parameter:** name**Type:** string**Description:** Resource provider name**Parameter:** enabled**Type:** boolean**Description:** Resource provider is currently enabled**Parameter:** priority**Type:** unsigned integer**Description:** Node provider priority**Parameter:** wholeTime**Type:** unsigned integer**Description:** A compute node running time (in minutes) before it is stopped if no workload requires it**Parameter:** stoppingAllowancePeriod**Type:** unsigned integer**Description:** A time (in minutes) just before the end of the wholeTime period prior to which all power off (or terminate) operations must be started**Parameter:** keepRunning**Type:** string**Description:** Nodes that should not be stopped or terminated even if they are unused (range format)**Parameter:** extraNodes**Type:** list of strings**Description:** Nodes that should be started before regular nodes**Parameter:** extraNodeIdleTime**Type:** unsigned integer**Description:** Time, in seconds, that extra nodes can remain unused (after this time they are stopped)**Parameter:** extraNodeStart**Type:** boolean**Description:** Automatically start extra node before the first compute node is started**Parameter:** extraNodeStop**Type:** boolean**Description:** Automatically stop extra node after the last compute node stops**Parameter:** defaultResources**Type:** list of strings

Description: List of default resources in format [name=value]

Parameter: options

Type: list of strings

Description: Additional resource provider related parameters that will be passed to cm-scale daemon

5.2.571 ScaleServerRole : Role

parent : Role

Parameter: engines

Type: list of ScaleEngine

Description: Submode containing workload engines settings

Parameter: resourceProviders

Type: list of ScaleResourceProvider

Description: List of resource providers

Parameter: dryRun

Type: boolean

Description: Run in dry run mode

Parameter: debug

Type: boolean

Description: Print debug messages to the log

Parameter: runInterval

Type: unsigned integer

Description: Frequency of cm-scale decision making (in seconds)

Parameter: advancedSettings

Type: ScaleAdvancedSettings

Description: Submode containing advanced settings

5.2.572 ScaleStaticNodesProvider : ScaleResourceProvider

parent : ScaleResourceProvider

Parameter: nodes

Type: list of references to Node

Description: List of managed nodes

Parameter: nodegroups

Type: list of references to NodeGroup

Description: List of managed nodegroups

5.2.573 ScaleTracker : Entity

parent : Entity

Parameter: name

Type: string

Description: Tracker name

Parameter: enabled

Type: boolean

Description: Tracker is currently enabled or disabled

Parameter: pendingWorkloads

Type: list of ScalePendingWorkload

Description: List of pending workloads

Parameter: assignCategory

Type: reference to Category

Description: Category that should be assigned to managed nodes

Parameter: primaryOverlays

Type: list of references to ConfigurationOverlay

Description: Configuration overlays that managed nodes are added to when they are required by workload

Parameter: secondaryOverlays

Type: list of references to ConfigurationOverlay

Description: Configuration overlays that the managed nodes are added to when no longer on load

Parameter: queueLengthThreshold

Type: unsigned integer

Description: Number of pending workloads/jobs that triggers the nodes bursting

Parameter: ageThreshold

Type: unsigned integer

Description: Workload/job pending time threshold that triggers the nodes bursting for this workload (in seconds)

Parameter: options

Type: list of strings

Description: Additional tracker related parameters

5.2.574 Semaphore:Entity

parent: Entity

Parameter: refNodeUniqueKey

Type: unsigned integer

Description: Node

Parameter: semid

Type: integer

Description: Semaphore Set ID

Parameter: ipcperm

Type: IPCPerm

Description: IPC permissions

Parameter: nsems

Type: unsigned integer

Description: Number of semaphores in the set

5.2.575 Sensor:Entity

parent : Entity

Parameter: type

Type: enum

Description: Sensor type

Parameter: name

Type: string

Description: Sensor name

Parameter: prt

Type: unsigned integer

Description: Sensor port

5.2.576 Session:Entity

parent : Entity

Parameter: eventCounter

Type: unsigned integer

Description: *none*

Parameter: queuedEventSize

Type: unsigned integer

Description: *none*

Parameter: clientType

Type: unsigned integer

Description: *none*

Parameter: acknowledgedKeepAlive

Type: integer

Description: *none*

Parameter: nodeKey

Type: unsigned integer

Description: *none*

Parameter: remoteAddress

Type: IP

Description: *none*

Parameter: username

Type: string

Description: *none*

Parameter: group

Type: string

Description: none

5.2.577 SharedMemory : Entity

parent : Entity

Parameter: refNodeUniqueKey

Type: unsigned integer

Description: Node

Parameter: shmid

Type: integer

Description: Shared memory ID

Parameter: ipcperm

Type: IPCPerm

Description: IPC permissions

Parameter: size

Type: unsigned integer

Description: Size in bytes

Parameter: cpid

Type: integer

Description: Creator PID

Parameter: natch

Type: integer

Description: Number of attaches

5.2.578 SlurmAccountingRole : Role

parent : Role

Parameter: dbdPort

Type: unsigned integer

Description: The port number that the Slurm Database Daemon (slurmdbd) listens to for work

Parameter: storageHost

Type: string

Description: Defines the name of the host the MySQL database is running where slurmdbd is going to store the data

Parameter: storagePort

Type: unsigned integer

Description: The port number that the Slurm Database Daemon (slurmdbd) communicates with the database

Parameter: storageLoc

Type: string

Description: The name of the database as the location where slurmdbd accounting records are written

Parameter: storageUser

Type: string

Description: Defines the name of the user to connect to the MySQL database with to store the job accounting data

Parameter: slurmWlmClusters

Type: list of references to SlurmWlmCluster

Description: List of Slurm clusters which can make use of this SlurmAccountingRole (slurmdbd)

5.2.579 SlurmCgroupsSettings : WlmCgroupsSettings

parent : WlmCgroupsSettings

Parameter: allowedDevicesFile

Type: string

Description: If ConstrainDevices is true then this file has to be used to declare the devices that need to be allowed by default for all the jobs

Parameter: taskAffinity

Type: boolean

Description: If true then set a default task affinity to bind each step task to a subset of the allocated cores using sched_setaffinity

Parameter: constrainCores

Type: boolean

Description: If true then constrain allowed cores to the subset of allocated resources

Parameter: constrainRAMSpace

Type: boolean

Description: If true then constrain the job's RAM usage

Parameter: constrainSwapSpace

Type: boolean

Description: If true then constrain the job's swap space usage

Parameter: constrainDevices

Type: boolean

Description: If true constrain the job's allowed devices based on GRES allocated resources

Parameter: allowedRamSpace

Type: float

Description: Constrain the job cgroup RAM to this percentage of the allocated memory. The percentage supplied may be expressed as floating point number, e.g. 98.5. If the AllowedRAMSpace limit is exceeded, the job steps will be killed and a warning message will be written to standard error. Also see ConstrainRAMSpace. The default value is 100.

Parameter: allowedSwapSpace

Type: float

Description: Constrain the job cgroup swap space to this percentage of the allocated memory

Parameter: maxRAMPercent

Type: float

Description: Set an upper bound in percent of total RAM on the RAM constraint for a job

Parameter: maxSwapPercent

Type: float

Description: Set an upper bound (in percent of total RAM) on the amount of RAM+Swap that may be used for a job

Parameter: minRAMSpace

Type: unsigned integer

Description: Set a lower bound (in MB) on the memory limits defined by AllowedRAMSpace and AllowedSwapSpace

Parameter: jobCgroupTemplate

Type: string

Description: Template for job cgroup path (\$UID will be replaced to user ID, \$JOBID will be replaced to job id)

Parameter: allowedKmemSpace

Type: unsigned integer

Description: Constrain the job cgroup kernel memory to this amount of the allocated memory (in bytes)

Parameter: constrainKmemSpace

Type: boolean

Description: Specifies if Slurm will constrain the job's Kmem RAM usage

Parameter: minKmemSpace

Type: unsigned integer

Description: Set a lower bound (in MB) on the memory limits defined by AllowedKmemSpace

Parameter: maxKmemPercent

Type: float

Description: Set an upper bound in percent of total Kmem for a job

Parameter: memorySwappiness

Type: float

Description: Configure the kernel's priority for swapping out anonymous pages (such as program data) verses file cache pages for the job cgroup (either ConstrainRAMSpace or ConstrainSwapSpace must be enabled in order for this parameter to be applied)

5.2.580 SlurmClientRole : SlurmRole

parent : SlurmRole

Parameter: slots

Type: unsigned integer

Description: Number of slots available on this node/category (set 0 for default)

Parameter: queues

Type: list of references to SlurmJobQueue

Description: Queues this node/nodes in this category belongs to

Parameter: allQueues

Type: boolean

Description: When set, the role will provide all available queues (the queues property will then be ignored)

Parameter: nodeAddr

Type: string

Description: Name that a node should be referred to in establishing a communications path

Parameter: coresPerSocket

Type: unsigned integer

Description: Number of cores in a single physical processor socket

Parameter: features

Type: list of strings

Description: A list of arbitrary strings indicative of some characteristic associated with the node

Parameter: tcpPort

Type: unsigned integer

Description: The port number that the Slurm compute node daemon, slurmd, listens to for work on this particular node

Parameter: realMemory

Type: unsigned integer

Description: Size of real memory on the node in MegaBytes

Parameter: sockets

Type: unsigned integer

Description: Number of physical processor sockets/chips on the node

Parameter: threadsPerCore

Type: unsigned integer

Description: Number of logical threads in a single physical core

Parameter: tmpDisk

Type: unsigned integer

Description: Total size of temporary disk storage in TmpFS in MegaBytes

Parameter: weight

Type: integer

Description: The priority of the node for scheduling purposes

Parameter: boards

Type: unsigned integer

Description: Number of baseboards in nodes with a baseboard controller

Parameter: socketsPerBoard

Type: unsigned integer

Description: Number of physical processor sockets/chips on a baseboard

Parameter: powerSavingAllowed

Type: boolean

Description: Enable Slurm power saving for particular nodes, categories or configuration overlays

Parameter: reason

Type: string

Description: Identifies the reason for a node being in a particular state

Parameter: cpuSpecList

Type: list of strings

Description: A comma delimited list of Slurm abstract CPU IDs on which Slurm compute node daemons (slurmd, slurmstepd) will be confined

Parameter: coreSpecCount

Type: unsigned integer

Description: Number of cores in a single physical processor socket

Parameter: memSpecLimit

Type: unsigned integer

Description: Limit on combined real memory allocation for compute node daemons (slurmd, slurmstepd), in megabytes

Parameter: nodeCustomizations

Type: list of WlmNodeCustomizationEntry

Description: Slurm node custom properties

Parameter: genericResources

Type: list of SlurmGenericResource

Description: Slurm generic resources settings

5.2.581 SlurmGenericResource : Entity

parent : Entity

Parameter: alias

Type: string

Description: Unique alias name of the generic resource

Parameter: name

Type: string

Description: Name of the generic resource in Slurm

Parameter: count

Type: string

Description: Number of resources of this type available on this node (a suffix K, M, G, T or P may be used to multiply the number by 1024, 1048576, etc. respectively)

Parameter: cores

Type: string

Description: Specify the first thread CPU index numbers for the specific cores which can use this resource (e.g. '0,1,2,3' or '0-3')

Parameter: type

Type: string

Description: An arbitrary string identifying the type of device

Parameter: file

Type: string

Description: Fully qualified pathname of the device files associated with a resource (simple regular expressions are supported)

Parameter: consumable

Type: boolean

Description: Multiple jobs can use the same generic resource

5.2.582 SlurmJobQueueAccessList : Entity

parent : Entity

Parameter: wlmCluster

Type: reference to WlmCluster

Description: WLM cluster link to this job queue access list

Parameter: slurmJobQueue

Type: list of references to SlurmJobQueue

Description: List of queues that can be submitted to. If none is specified, this access list will submit to all job queues in the specified WlmCluster.

5.2.583 SlurmJobQueueStat : JobQueueStat

parent : JobQueueStat

Parameter: memory

Type: string

Description: Memory

Parameter: cpus

Type: unsigned integer

Description: CPUs

Parameter: total

Type: unsigned integer

Description: Total nodes

Parameter: usable

Type: unsigned integer

Description: Usable nodes

Parameter: free

Type: unsigned integer

Description: Free nodes

Parameter: limit

Type: unsigned integer

Description: Node limit

Parameter: timeLimit

Type: string

Description: Time limit

Parameter: other

Type: string

Description: Other traits

5.2.584 SlurmJobQueue : JobQueue

parent : JobQueue

Parameter: allocNodes

Type: string

Description: Allocate nodes

Parameter: defaultQueue

Type: boolean

Description: Set this as the default queue

Parameter: minNodes

Type: string

Description: Minimal nodes one job has to use

Parameter: maxNodes

Type: string

Description: Maximal nodes one job can use

Parameter: defaultTime

Type: string

Description: Default job runtime

Parameter: maxTime

Type: string

Description: Maximal job runtime

Parameter: priorityJobFactor

Type: integer

Description: Partition factor used by priority/multifactor plugin in calculating job priority

Parameter: priorityTier

Type: integer

Description: Jobs submitted to a partition with a higher priority tier value will be dispatched before pending jobs in partition with lower priority tier value

Parameter: hidden

Type: boolean

Description: Hide from all

Parameter: disableRoot

Type: boolean

Description: Do not allow root to run jobs

Parameter: rootOnly

Type: boolean

Description: Only allow root to run jobs

Parameter: allowGroups

Type: string

Description: Specify user groups which are allowed to run jobs

Parameter: overSubscribe

Type: string

Description: Controls the ability of the partition to execute more than one job at a time on each resource

Parameter: status

Type: string

Description: Queue status

Parameter: totalNodes

Type: unsigned integer

Description: Total number of nodes part of this queue

Parameter: totalCPUs

Type: unsigned integer

Description: Total number of CPUs available to this queue

Parameter: alternate

Type: string

Description: Partition name of alternate partition to be used if the state of this partition is DRAIN or INACTIVE

Parameter: `graceTime`

Type: unsigned integer

Description: Specifies, in units of seconds, the preemption grace time to be extended to a job which has been selected for preemption

Parameter: `defMemPerCPU`

Type: string

Description: Default real memory size available per allocated CPU in MegaBytes

Parameter: `maxMemPerCPU`

Type: string

Description: Maximum real memory size available per allocated CPU in MegaBytes

Parameter: `defMemPerNode`

Type: string

Description: Default real memory size available per allocated node in MegaBytes

Parameter: `maxMemPerNode`

Type: string

Description: Maximum real memory size available per allocated node in MegaBytes

Parameter: `preemptMode`

Type: string

Description: Mechanism used to preempt jobs from this partition

Parameter: `reqResv`

Type: string

Description: Specifies users of this partition are required to designate a reservation when submitting a job

Parameter: `SelectTypeParameters`

Type: string

Description: Partition-specific resource allocation type

Parameter: `allowAccounts`

Type: string

Description: Specify accounts which are allowed to run jobs

Parameter: `allowQos`

Type: string

Description: Specify qos which are allowed to run jobs

Parameter: `denyGroups`

Type: string

Description: Specify groups which are denied to run jobs

Parameter: `denyAccounts`

Type: string

Description: Specify accounts which are denied to run jobs

Parameter: denyQos

Type: string

Description: Specify qos which are denied to run jobs

Parameter: lln

Type: boolean

Description: Schedule resources to jobs on the least loaded nodes

Parameter: maxCPUsPerNode

Type: string

Description: Maximum number of CPUs on any node available to all jobs from this partition

Parameter: tresBillingWeights

Type: list of strings

Description: Billing weights of each TRES type that will be used in calculating the usage of a job

5.2.585 SlurmJob : Job

parent : Job

5.2.586 SlurmRole : Role

parent : Role

Parameter: wlmCluster

Type: reference to SlurmWlmCluster

Description: WLM cluster link to this WLM role

5.2.587 SlurmServerRole : SlurmRole

parent : SlurmRole

Parameter: scheduler

Type: string

Description: Scheduler to use in combination with slurm

Parameter: externalServer

Type: boolean

Description: Slurm server daemons are running on some external machine

5.2.588 SlurmSubmitRole : Role

parent : Role

Parameter: slurmJobQueueAccessList

Type: list of SlurmJobQueueAccessList

Description: List of slurm clusters and their associated queues that can be submitted to

5.2.589 SlurmWlmCluster : WlmCluster

parent : WlmCluster

Parameter: placeholders

Type: list of JobQueuePlaceholder

Description: Job queue node placeholders mode

Parameter: cgroups

Type: SlurmCgroupsSettings

Description: Submode containing Slurm related cgroups settings

Parameter: powerSavingEnabled

Type: boolean

Description: Enable power saving options into slurm.conf

Parameter: suspendTime

Type: integer

Description: Nodes which remain idle for this number of seconds will be placed into power save mode by SuspendProgram

Parameter: suspendTimeout

Type: unsigned integer

Description: Maximum time permitted (in second) between when a node suspend request is issued and when the node shutdown

Parameter: resumeTimeout

Type: unsigned integer

Description: Maximum time permitted (in second) between when a node is resume request is issued and when the node is actually available for use

Parameter: suspendProgram

Type: string

Description: Program that will be executed when a node remains idle for an extended period of time

Parameter: resumeProgram

Type: string

Description: Program that will be executed when a suspended node is needed by a submitted jobs

Parameter: prologSlurmctld

Type: string

Description: Fully qualified pathname of a program for the slurmctld daemon to execute before granting a new job allocation (e.g. /usr/local/slurm/prolog_controller)

Parameter: prolog

Type: string

Description: Fully qualified pathname of a program for the slurmd to execute whenever it is asked to run a job step from a new job allocation (e.g. /usr/local/slurm/prolog)

Parameter: epilog

Type: string

Description: Fully qualified pathname of a script to execute as user root on every node when a user's job completes (e.g. /usr/local/slurm/epilog)

Parameter: fastSchedule

Type: unsigned integer

Description: Controls how a node's configuration specifications in slurm.conf are used

Parameter: gresTypes

Type: list of strings

Description: A list of generic resources to be managed

Parameter: prefix

Type: string

Description: Slurm root installation directory

Parameter: etc

Type: string

Description: Slurm configuration files directory

Parameter: stateSave

Type: string

Description: Directory into which the Slurm controller saves its state

Parameter: version

Type: string

Description: Major Slurm version

Parameter: slurmConfFileTemplate

Type: string

Description: Template for slurm.conf file

Parameter: gresConfFileTemplate

Type: string

Description: Template for gres.conf file

5.2.590 `SNMPSettings` : Entity

parent : Entity

Parameter: version

Type: enum

Description: *none*

Parameter: timeout

Type: float

Description: SNMP timeout, set to 0 for default

Parameter: vlanTimeout

Type: float

Description: SNMP timeout for VLAN calls, set to 0 for default

Parameter: retries

Type: integer

Description: SNMP retries, set to -1 for default

Parameter: readString

Type: string

Description: SNMP read-only community string

Parameter: writeString

Type: string

Description: SNMP read-write community string

Parameter: securityName

Type: string

Description: Security name

Parameter: context

Type: string

Description: *none*

Parameter: authProtocol

Type: enum

Description: Authentication protocol

Parameter: privProtocol

Type: enum

Description: Privacy protocol

Parameter: authKey

Type: string

Description: Authentication key

Parameter: privKey

Type: string

Description: Privacy key

Parameter: securityLevel

Type: enum

Description: Security level

Parameter: filename

Type: string

Description: Filename for SNMP testing

5.2.591 SnmpTrapRole : Role

parent : Role

Parameter: event

Type: boolean

Description: Enable events

Parameter: mail

Type: boolean

Description: Enable mail

Parameter: recipients

Type: list of strings

Description: Recipients

Parameter: allAdministrators

Type: boolean

Description: Also send e-mail to all administrators as defined in partition

Parameter: access

Type: string

Description: Access string

Parameter: server

Type: string

Description: The SNMP server

Parameter: sender

Type: string

Description: The sender of the e-mail

Parameter: arguments

Type: list of strings

Description: Additional script arguments

Parameter: alternativeScript

Type: string

Description: Alternative script

5.2.592 SoftwareImageFileSelection:Entity

parent: Entity

Parameter: name

Type: string

Description: Name

Parameter: patterns

Type: list of strings

Description: Patterns to be included

Parameter: watch

Type: boolean

Description: Watch files with inotify

5.2.593 SoftwareImageProxy : Entity**parent** : Entity**Parameter:** parentSoftwareImage**Type:** reference to SoftwareImage**Description:** Parent software image**Parameter:** revisionID**Type:** integer**Description:** Revision ID**5.2.594** SoftwareImageRevisionInfo : Entity**parent** : Entity**Parameter:** image**Type:** reference to SoftwareImage or None**Description:** *none***Parameter:** revisionID**Type:** integer**Description:** Revision ID**Parameter:** creationTime**Type:** timestamp**Description:** Revision creation time**Parameter:** removalTime**Type:** timestamp**Description:** Revision removal time**Parameter:** description**Type:** string**Description:** Revision Description**5.2.595** SoftwareImage : Entity**parent** : Entity**Parameter:** name**Type:** string**Description:** Name**Parameter:** path**Type:** string**Description:** Base directory of the image**Parameter:** originalImage**Type:** unsigned integer**Description:** Image from which this one will be cloned**Parameter:** fileOperationInProgress**Type:** boolean

Description: *none*

Parameter: `kernelVersion`

Type: `string`

Description: Kernel version used

Parameter: `kernelParameters`

Type: `string`

Description: Kernel parameters passed to the kernel at boot time

Parameter: `kernelOutputConsole`

Type: `string`

Description: Kernel output console used at boot time

Parameter: `creationTime`

Type: `timestamp`

Description: Creation time

Parameter: `modules`

Type: `list of KernelModule`

Description: Manage kernel modules loaded in this image

Parameter: `enableSOL`

Type: `boolean`

Description: Enable Serial console Over LAN

Parameter: `SOLPort`

Type: `string`

Description: Serial port to use for SOL, usually `ttyS0` or `ttyS1`

Parameter: `SOLSpeed`

Type: `string`

Description: Baud rate to use for SOL

Parameter: `SOLFlowControl`

Type: `boolean`

Description: Enable to use hardware flow control for SOL

Parameter: `notes`

Type: `string`

Description: Administrator notes

Parameter: `fspart`

Type: `reference to FSPart or None`

Description: Internal pointer to the FSPart associated with this image

Parameter: `bootfspart`

Type: reference to FSPart or None

Description: Internal pointer to the FSPart associated with the boot directory of this image

Parameter: revisionDescription

Type: string

Description: *none*

Parameter: revisionID

Type: integer

Description: *none*

Parameter: parentSoftwareImage

Type: reference to SoftwareImage or None

Description: *none*

Parameter: revisionHistory

Type: list of SoftwareImageRevisionInfo

Description: *none*

5.2.596 StandaloneMonitoredEntity : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: type

Type: string

Description: Optional type in case name matches an other entity

Parameter: data

Type: string

Description: Data that will be passed to the script environment

Parameter: notes

Type: string

Description: Notes

5.2.597 StaticRoute : Entity

parent : Entity

Parameter: name

Type: string

Description: Generally a unique combination of gateway ip and netmaskbits

Parameter: ip

Type: IP

Description: IP of the node

Parameter: gateway

Type: IP

Description: Gateway IP address

Parameter: netmaskBits

Type: unsigned integer

Description: Netmask bits

Parameter: network

Type: reference to Network

Description: Network the interface is connected to

Parameter: networkDeviceName

Type: string

Description: Name of network device

5.2.598 StatusCollectorSubSystemInfo : StatusSubSystemInfo

parent : StatusSubSystemInfo

Parameter: nodes

Type: unsigned integer

Description: *none*

Parameter: updates

Type: unsigned integer

Description: *none*

Parameter: merges

Type: unsigned integer

Description: *none*

5.2.599 StatusControllerSubSystemInfo : StatusSubSystemInfo

parent : StatusSubSystemInfo

Parameter: updates

Type: unsigned integer

Description: *none*

Parameter: reports

Type: unsigned integer

Description: *none*

Parameter: nodes

Type: unsigned integer

Description: *none*

Parameter: icmpPingCount

Type: unsigned integer

Description: *none*

Parameter: checkUrlCount

Type: unsigned integer

Description: *none*

Parameter: customScriptCount

Type: unsigned integer

Description: *none*

Parameter: customFunctionCount

Type: unsigned integer

Description: *none*

5.2.600 StatusManagerSubSystemInfo : StatusSubSystemInfo

parent : StatusSubSystemInfo

Parameter: nodes

Type: unsigned integer

Description: *none*

Parameter: events

Type: unsigned integer

Description: *none*

5.2.601 StatusRuleSubSystemInfo : StatusSubSystemInfo

parent : StatusSubSystemInfo

Parameter: rules

Type: unsigned integer

Description: *none*

Parameter: updates

Type: unsigned integer

Description: *none*

Parameter: checks

Type: unsigned integer

Description: *none*

5.2.602 StatusSubSystemInfo : SubSystemInfo

parent : SubSystemInfo

Parameter: stopped

Type: boolean

Description: Stopped

Parameter: suspended

Type: boolean

Description: Suspended

5.2.603 StatusTimeoutSubSystemInfo : StatusSubSystemInfo

parent : StatusSubSystemInfo

Parameter: active

Type: unsigned integer

Description: *none*

Parameter: registered

Type: unsigned integer

Description: *none*

Parameter: handled

Type: unsigned integer

Description: *none*

5.2.604 StatusTransitionSubSystemInfo : StatusSubSystemInfo

parent : StatusSubSystemInfo

Parameter: handled

Type: unsigned integer

Description: *none*

Parameter: transitions

Type: list of unsigned numbers

Description: Transition matrices: from -> to

5.2.605 StorageNodePolicy : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: exportedDirectories

Type: list of strings

Description: Exported directories

Parameter: minStorageVolumeSize

Type: unsigned integer

Description: Minimal size of storage volume

Parameter: defaultJobOutputSize

Type: unsigned integer

Description: Default size of job output data

Parameter: storageVolumeFilesystem

Type: string

Description: Filesystem type of storage volume

Parameter: shareStorageVolumeBetweenJobs

Type: boolean

Description: Share storage volumes between jobs

Parameter: scalingUpFactor

Type: float

Description: Scaling up factor

Parameter: storageNodeNamePrefix

Type: string

Description: Storage node name prefix

Parameter: storagePrototype

Type: reference to CloudNode

Description: Template node used for instantiating cloud storage nodes

Parameter: maxStorageNodeCount

Type: unsigned integer

Description: Maximum number of storage nodes

Parameter: maxJobsPerNode

Type: unsigned integer

Description: Maximum number of jobs that can be run on a single storage node simultaneously

Parameter: storageNodeIdleTimeLimit

Type: unsigned integer

Description: After that timeout storage node will be shut down

Parameter: terminateStorageNodes

Type: boolean

Description: Terminate storage nodes instead of powering them off

Parameter: cloudOperationTimeout

Type: unsigned integer

Description: Timeout for various cloud job operations

Parameter: maxDownloadTime

Type: unsigned integer

Description: Maximum time job results data transfer can take

Parameter: maxUploadTime

Type: unsigned integer

Description: Maximum time job input data transfer can take

Parameter: intermediateStorage

Type: CMJobIntermediateStorage

Description: Place to store data to be accessible from storage node

Parameter: extraOptions

Type: list of strings

Description: Extra options for jobs

5.2.606 StorageRole : Role

parent : Role

Parameter: nfsThreads

Type: unsigned integer

Description: Number of nfs threads (0 for don't touch the current config file value)

Parameter: disableNFS1

Type: boolean

Description: Disable NFS1, NFS threads needs to bet set

Parameter: disableNFS2

Type: boolean

Description: Disable NFS2, NFS threads needs to bet set

Parameter: disableNFS3

Type: boolean

Description: Disable NFS3, NFS threads needs to bet set

Parameter: disableNFS4

Type: boolean

Description: Disable NFS4, NFS threads needs to bet set

Parameter: nfs4grace

Type: unsigned integer

Description: NFS4 grace period (0 for don't touch the current config file value)

Parameter: statdPort

Type: unsigned integer

Description: Stat daemon port (0 for don't touch the current config file value)

Parameter: statdOutgoingPort

Type: unsigned integer

Description: Stat daemon outgoing port (0 for don't touch the current config file value)

Parameter: mountdPort

Type: unsigned integer

Description: Mount daemon port (0 for don't touch the current config file value)

Parameter: rquotadPort

Type: unsigned integer

Description: Rquota daemon port (0 for don't touch the current config file value)

Parameter: lockdTcpPort

Type: unsigned integer

Description: Lock daemon TCP port (0 for don't touch the current config file value)

Parameter: lockdUdpPort

Type: unsigned integer

Description: Lock daemon UDP port (0 for don't touch the current config file value)

Parameter: rdmaPort

Type: unsigned integer

Description: RDMA port (0 for don't touch the current config file value)

5.2.607 StringListObject : Entity

parent : Entity

Parameter: list

Type: list of strings

Description: List

5.2.608 SubnetManagerRole : Role

parent : Role

Parameter: interconnect

Type: enum

Description: Type of interconnect

Parameter: ibl2mtu

Type: enum

Description: IB L2 MTU Value

5.2.609 SubSystemInfo : Entity

parent : Entity

Parameter: refNodeUniqueKey

Type: unsigned integer

Description: Node

Parameter: name

Type: string

Description: Name

Parameter: timestamp

Type: timestamp

Description: Time

5.2.610 SwitchPort : Entity

parent : Entity

Parameter: ethernetSwitch

Type: reference to EthernetSwitch

Description: Pointer to an ethernet switch

Parameter: prt

Type: integer

Description: Port number on the switch

5.2.611 Switch:Device

parent : Device

Parameter: ip

Type: IP

Description: IP address

Parameter: network

Type: reference to Network or None

Description: Network to which this switch is connected

Parameter: ports

Type: integer

Description: Number of ports

Parameter: model

Type: string

Description: The switch model

Parameter: snmpSettings

Type: SNMPSettings or None

Description: Configure the cluster wide SNMP settings

Parameter: members

Type: list of references to Switch

Description: List of switches belonging to this stack

Parameter: controlScript

Type: string

Description: Custom control script that provides switch functionality

Parameter: controlScriptTimeout

Type: unsigned integer

Description: Control script timeout

5.2.612 SyncInfo:Entity

parent : Entity

Parameter: node

Type: reference to Node

Description: *none*

Parameter: provisioningNode

Type: reference to Node

Description: *none*

Parameter: fspart

Type: reference to FSPart

Description: *none*

Parameter: `mode`

Type: `enum`

Description: *none*

Parameter: `type`

Type: `enum`

Description: *none*

Parameter: `dryRun`

Type: `boolean`

Description: *none*

Parameter: `startTime`

Type: `timestamp`

Description: *none*

Parameter: `endTime`

Type: `timestamp`

Description: *none*

Parameter: `exitCode`

Type: `integer`

Description: *none*

Parameter: `signal`

Type: `integer`

Description: *none*

Parameter: `numberOfFiles`

Type: `unsigned integer`

Description: The count of all 'files' (in the generic sense), which includes directories, symlinks, etc.

Parameter: `numberOfTransferredFiles`

Type: `unsigned integer`

Description: The count of normal files that were updated via rsync's delta-transfer algorithm, which does not include created dirs, symlinks, etc.

Parameter: `numberOfCreatedFiles`

Type: `unsigned integer`

Description: The count of normal files that were created.

Parameter: `numberOfDeletedFiles`

Type: `unsigned integer`

Description: The count of normal files that were deleted.

Parameter: totalFileSize

Type: unsigned integer

Description: The total sum of all file sizes in the transfer. This does not count any size for directories or special files, but does include the size of symlinks.

Parameter: totalTransferredFileSize

Type: unsigned integer

Description: The total sum of all files sizes for just the transferred files.

Parameter: literalData

Type: unsigned integer

Description: How much unmatched file-update data we had to send to the receiver for it to recreate the updated files.

Parameter: matchedData

Type: unsigned integer

Description: How much data the receiver got locally when recreating the updated files.

Parameter: fileListSize

Type: unsigned integer

Description: How big the file-list data was when the sender sent it to the receiver. This is smaller than the in-memory size for the file list due to some compressing of duplicated data when rsync sends the list.

Parameter: fileListGenerationTime

Type: float

Description: The number of seconds that the sender spent creating the file list. This requires a modern rsync on the sending side for this to be present.

Parameter: fileListTransferTime

Type: float

Description: The number of seconds that the sender spent sending the file list to the receiver.

Parameter: totalSent

Type: unsigned integer

Description: The count of all the bytes that rsync sent from the client side to the server side.

Parameter: totalReceived

Type: unsigned integer

Description: The count of all non-message bytes that rsync received by the client side from the server side. 'Non-message' bytes means that we don't count the bytes for a verbose message that the server sent to us, which makes the stats more consistent.

Parameter: transferSpeed

Type: float

Description: Transfer speed

Parameter: speedup

Type: float

Description: Speedup

5.2.613 SyncSource : Entity

parent : Entity

Parameter: refNodeUniqueKey

Type: unsigned integer

Description: Node

Parameter: fspart

Type: reference to FSPart

Description: *none*

Parameter: priority

Type: unsigned integer

Description: *none*

5.2.614 SyncTarget : Entity

parent : Entity

Parameter: refNodeUniqueKey

Type: unsigned integer

Description: Node

Parameter: fspart

Type: reference to FSPart

Description: *none*

Parameter: target

Type: string

Description: *none*

Parameter: prefix

Type: string

Description: *none*

Parameter: excludeList

Type: string

Description: *none*

Parameter: root

Type: boolean

Description: *none*

Parameter: priority

Type: unsigned integer

Description: *none*

5.2.615 SysInfoCollector: Entity

parent : Entity

Parameter: refNodeUniqueKey

Type: unsigned integer

Description: Device

Parameter: processors

Type: list of Processor

Description: *none*

Parameter: disks

Type: list of DiskInfo

Description: *none*

Parameter: gpus

Type: list of GPUInfo

Description: *none*

Parameter: fpgas

Type: list of FPGAInfo

Description: *none*

Parameter: memory

Type: list of MemoryInfo

Description: *none*

Parameter: biosVersion

Type: string

Description: *none*

Parameter: biosVendor

Type: string

Description: *none*

Parameter: biosDate

Type: string

Description: *none*

Parameter: motherboardManufacturer

Type: string

Description: *none*

Parameter: motherboardName

Type: string

Description: *none*

Parameter: memoryTotal

Type: unsigned integer

Description: *none*

Parameter: memorySwap

Type: unsigned integer

Description: *none*

Parameter: diskCount

Type: unsigned integer

Description: *none*

Parameter: diskTotalSpace

Type: unsigned integer

Description: *none*

Parameter: osName

Type: string

Description: *none*

Parameter: osVersion

Type: string

Description: *none*

Parameter: osFlavor

Type: string

Description: *none*

Parameter: vendorTag

Type: string

Description: *none*

Parameter: systemName

Type: string

Description: *none*

Parameter: systemManufacturer

Type: string

Description: *none*

Parameter: mountPoints

Type: list of FSMount

Description: *none*

Parameter: nics

Type: list of strings

Description: *none*

Parameter: bootIf

Type: string

Description: *none*

Parameter: partitions

Type: list of strings

Description: *none*

Parameter: interconnects

Type: list of strings

Description: *none*

Parameter: raidControllers

Type: list of strings

Description: *none*

Parameter: virtualCluster

Type: boolean

Description: *none*

Parameter: clusterRandomNumber

Type: unsigned integer

Description: *none*

Parameter: updateCount

Type: unsigned integer

Description: *none*

5.2.616 UCSAdaptorEthCompQueueProfile : UCSBase

parent : UCSBase

Parameter: count

Type: unsigned integer

Description: Count

5.2.617 UCSAdaptorEthGenProfile : UCSBase

parent : UCSBase

Parameter: order

Type: string

Description: Order

Parameter: rateLimit

Type: string

Description: Rate limit

Parameter: trustedClassOfService

Type: boolean

Description: Trusted class of service

Parameter: uplinkFailbackTimeout
Type: string
Description: Uplink failback timeout

Parameter: uplinkFailover
Type: boolean
Description: Uplink failover

Parameter: vlan
Type: string
Description: Vlan

Parameter: vlanMode
Type: string
Description: Vlan mode

5.2.618 UCSAdaptorEthInterruptProfile : UCSBase

parent : UCSBase

Parameter: coalescingTime
Type: unsigned integer
Description: Coalescing time

Parameter: coalescingType
Type: string
Description: Coalescing type

Parameter: count
Type: unsigned integer
Description: Count

Parameter: mode
Type: string
Description: Mode

5.2.619 UCSAdaptorEthOffloadProfile : UCSBase

parent : UCSBase

Parameter: largeReceive
Type: boolean
Description: Large receive

Parameter: tcpRxChecksum
Type: boolean
Description: Tcp rx checksum

Parameter: tcpSegment
Type: boolean
Description: Tcp segment

Parameter: tcpTxChecksum
Type: boolean
Description: Tcp tx checksum

5.2.620 UCSAdaptorEthRecvQueueProfile : UCSBase

parent : UCSBase
Parameter: count
Type: unsigned integer
Description: Count

Parameter: ringSize
Type: unsigned integer
Description: Ring size

5.2.621 UCSAdaptorEthUSNICProfile : UCSBase

parent : UCSBase
Parameter: classOfService
Type: unsigned integer
Description: Class of service

Parameter: coalescingTime
Type: unsigned integer
Description: Coalescing time

Parameter: coalescingType
Type: string
Description: Coalescing type

Parameter: completionQueueCount
Type: unsigned integer
Description: Completion queue count

Parameter: interruptCount
Type: unsigned integer
Description: Interrupt count

Parameter: largeReceive
Type: boolean
Description: Large receive

Parameter: receiveQueueCount
Type: unsigned integer
Description: Receive queue count

Parameter: receiveQueueRingSize
Type: unsigned integer
Description: Receive queue ring size

Parameter: tcpRxChecksum
Type: boolean
Description: Tcp rx checksum

Parameter: tcpSegment
Type: boolean
Description: Tcp segment

Parameter: tcpTxChecksum
Type: boolean
Description: Tcp tx checksum

Parameter: transmitQueueCount
Type: unsigned integer
Description: Transmit queue count

Parameter: transmitQueueRingSize
Type: unsigned integer
Description: Transmit queue ring size

Parameter: usnicCount
Type: unsigned integer
Description: Usnic count

5.2.622 UCSAdaptorEthWorkQueueProfile : UCSBase

parent : UCSBase
Parameter: count
Type: unsigned integer
Description: Count

Parameter: ringSize
Type: unsigned integer
Description: Ring size

5.2.623 UCSAdaptorExtEthIf : UCSBase

parent : UCSBase
Parameter: portId
Type: unsigned integer
Description: Port ID

Parameter: ifType
Type: string
Description: Interface type

Parameter: mac
Type: string
Description: MAC

Parameter: linkState
Type: string
Description: Link State

Parameter: transport
Type: string
Description: Transport

Parameter: adminSpeed
Type: string
Description: Admin Speed

Parameter: operSpeed
Type: string
Description: Operation Speed

Parameter: adaptorPortProfiles
Type: UCSAdaptorPortProfiles or None
Description: *none*

5.2.624 UCSAdaptorExtIpV6RssHashProfile : UCSBase

parent : UCSBase
Parameter: ipHash
Type: boolean
Description: Ip hash

Parameter: tcpHash
Type: boolean
Description: Tcp hash

5.2.625 UCSAdaptorFcCdbWorkQueueProfile : UCSBase

parent : UCSBase
Parameter: count
Type: unsigned integer
Description: Count

Parameter: ringSize
Type: unsigned integer
Description: Ring size

5.2.626 UCSAdaptorFcErrorRecoveryProfile : UCSBase

parent : UCSBase
Parameter: errorDetectTimeout
Type: unsigned integer
Description: Error detect timeout

Parameter: fcpErrorRecovery
Type: boolean

Description: Fcp error recovery

Parameter: linkDownTimeout

Type: unsigned integer

Description: Link down timeout

Parameter: portDownIoRetryCount

Type: unsigned integer

Description: Port down IO retry count

Parameter: portDownTimeout

Type: unsigned integer

Description: Port down timeout

Parameter: resourceAllocationTimeout

Type: unsigned integer

Description: Resource allocation timeout

5.2.627 UCSAdaptorFcGenProfile : UCSBase

parent : UCSBase

Parameter: classOfService

Type: unsigned integer

Description: Class of service

Parameter: mac

Type: string

Description: MAC

Parameter: maxDataFieldSize

Type: unsigned integer

Description: Max data field size

Parameter: order

Type: string

Description: Order

Parameter: persistentLunBind

Type: boolean

Description: Persistent lun bind

Parameter: rateLimit

Type: string

Description: Rate limit

Parameter: vlan

Type: string

Description: Vlan

5.2.628 UCSAdaptorFcInterruptProfile : UCSBase

parent : UCSBase
Parameter: mode
Type: string
Description: Mode

5.2.629 UCSAdaptorFcPortFLogiProfile : UCSBase

parent : UCSBase
Parameter: retries
Type: string
Description: Retries

Parameter: timeout
Type: unsigned integer
Description: Timeout

5.2.630 UCSAdaptorFcPortPLogiProfile : UCSBase

parent : UCSBase
Parameter: retries
Type: unsigned integer
Description: Retries

Parameter: timeout
Type: unsigned integer
Description: Timeout

5.2.631 UCSAdaptorFcPortProfile : UCSBase

parent : UCSBase
Parameter: ioThrottleCount
Type: unsigned integer
Description: Io throttle count

Parameter: lunsPerTarget
Type: unsigned integer
Description: Luns per target

5.2.632 UCSAdaptorFcRecvQueueProfile : UCSBase

parent : UCSBase
Parameter: ringSize
Type: unsigned integer
Description: Ring size

5.2.633 UCSAdaptorFcWorkQueueProfile : UCSBase

parent : UCSBase
Parameter: ringSize
Type: unsigned integer
Description: Ring size

5.2.634 UCSAdaptorHostEthIf : UCSBase**parent :** UCSBase**Parameter:** channelNumber**Type:** unsigned integer**Description:** Channel number**Parameter:** classOfService**Type:** unsigned integer**Description:** Class of service**Parameter:** ifType**Type:** string**Description:** If type**Parameter:** iscsiBoot**Type:** boolean**Description:** Iscsi boot**Parameter:** mac**Type:** string**Description:** MAC**Parameter:** mtu**Type:** unsigned integer**Description:** MTU**Parameter:** name**Type:** string**Description:** Name**Parameter:** portProfile**Type:** string**Description:** Port profile**Parameter:** pxeBoot**Type:** boolean**Description:** PXE boot**Parameter:** uplinkPort**Type:** unsigned integer**Description:** Uplink port**Parameter:** usnicCount**Type:** unsigned integer**Description:** Usnic count**Parameter:** adaptorEthGenProfile

Type: UCSAdaptorEthGenProfile or None

Description: *none*

Parameter: adaptorEthCompQueueProfile

Type: UCSAdaptorEthCompQueueProfile or None

Description: *none*

Parameter: adaptorEthInterruptProfile

Type: UCSAdaptorEthInterruptProfile or None

Description: *none*

Parameter: adaptorEthOffloadProfile

Type: UCSAdaptorEthOffloadProfile or None

Description: *none*

Parameter: adaptorEthRecvQueueProfile

Type: UCSAdaptorEthRecvQueueProfile or None

Description: *none*

Parameter: adaptorEthUSNICProfile

Type: UCSAdaptorEthUSNICProfile or None

Description: *none*

Parameter: adaptorEthWorkQueueProfile

Type: UCSAdaptorEthWorkQueueProfile or None

Description: *none*

Parameter: adaptorExtIpV6RssHashProfile

Type: UCSAdaptorExtIpV6RssHashProfile or None

Description: *none*

Parameter: adaptorIpV6RssHashProfile

Type: UCSAdaptorIpV6RssHashProfile or None

Description: *none*

Parameter: adaptorIpV4RssHashProfile

Type: UCSAdaptorIpV4RssHashProfile or None

Description: *none*

Parameter: adaptorRssProfile

Type: UCSAdaptorRssProfile or None

Description: *none*

5.2.635 UCSAdaptorHostFcIf : UCSBase

parent : UCSBase

Parameter: adminPersistentBindings

Type: string

Description: Admin persistent bindings

Parameter: channelNumber

Type: unsigned integer

Description: Channel number

Parameter: ifType

Type: string

Description: If type

Parameter: name

Type: string

Description: Name

Parameter: portProfile

Type: string

Description: Port profile

Parameter: sanBoot

Type: boolean

Description: San boot

Parameter: uplinkPort

Type: unsigned integer

Description: Uplink port

Parameter: wwnn

Type: string

Description: Wwnn

Parameter: wwpn

Type: string

Description: Wwpn

Parameter: adaptorFcCdbWorkQueueProfile

Type: UCSAdaptorFcCdbWorkQueueProfile or None

Description: *none*

Parameter: adaptorFcErrorRecoveryProfile

Type: UCSAdaptorFcErrorRecoveryProfile or None

Description: *none*

Parameter: adaptorFcGenProfile

Type: UCSAdaptorFcGenProfile or None

Description: *none*

Parameter: adaptorFcInterruptProfile

Type: UCSAdaptorFcInterruptProfile or None

Description: *none*

Parameter: adaptorFcPortFLogiProfile

Type: UCSAdaptorFcPortFLogiProfile or None

Description: *none*

Parameter: adaptorFcPortPLogiProfile

Type: UCSAdaptorFcPortPLogiProfile or None

Description: *none*

Parameter: adaptorFcPortProfile

Type: UCSAdaptorFcPortProfile or None

Description: *none*

Parameter: adaptorFcRecvQueueProfile

Type: UCSAdaptorFcRecvQueueProfile or None

Description: *none*

Parameter: adaptorFcWorkQueueProfile

Type: UCSAdaptorFcWorkQueueProfile or None

Description: *none*

5.2.636 UCSAdaptorIpV4RssHashProfile : UCSBase

parent : UCSBase

Parameter: ipHash

Type: boolean

Description: Ip hash

Parameter: tcpHash

Type: boolean

Description: Tcp hash

5.2.637 UCSAdaptorIpV6RssHashProfile : UCSBase

parent : UCSBase

Parameter: ipHash

Type: boolean

Description: Ip hash

Parameter: tcpHash

Type: boolean

Description: Tcp hash

5.2.638 UCSAdaptorPortProfiles : UCSBase

parent : UCSBase

Parameter: portProfilesCount

Type: unsigned integer

Description: Port Profiles Count

Parameter: portProfilesName

Type: string

Description: Port Profiles Name

5.2.639 UCSAdaptorRssProfile : UCSBase

parent : UCSBase

Parameter: receiveSideScaling

Type: string

Description: Receive Side Scaling

5.2.640 UCSBase : Entity

parent : Entity

Parameter: dn

Type: string

Description: *none*

Parameter: additionalattributes

Type: string

Description: Additional attributes that may need to be set

5.2.641 UCSBiosBootDevGrp : UCSBase

parent : UCSBase

Parameter: order

Type: unsigned integer

Description: Boot order

Parameter: descr

Type: string

Description: Device name

Parameter: type

Type: string

Description: Device type

Parameter: biosBootDev

Type: list of UCSBiosBootDev

Description: *none*

5.2.642 UCSBiosBootDev : UCSBase

parent : UCSBase

Parameter: order

Type: unsigned integer

Description: Boot order

Parameter: descr

Type: string

Description: Device name

5.2.643 UCSBiosSettings : UCSBase

parent : UCSBase

Parameter: biosVfIntelHyperThreadingTech

Type: UCSBiosVfIntelHyperThreadingTech or None

Description: Intel hyper threading tech

Parameter: biosVfAdjacentCacheLinePrefetch

Type: UCSBiosVfAdjacentCacheLinePrefetch or None

Description: *none*

Parameter: biosVfAltitude

Type: UCSBiosVfAltitude or None

Description: *none*

Parameter: biosVfASPMSupport

Type: UCSBiosVfASPMSupport or None

Description: *none*

Parameter: biosVfConsoleRedirection

Type: UCSBiosVfConsoleRedirection or None

Description: *none*

Parameter: biosVfCoreMultiProcessing

Type: UCSBiosVfCoreMultiProcessing or None

Description: *none*

Parameter: biosVfCPUEnergyPerformance

Type: UCSBiosVfCPUEnergyPerformance or None

Description: *none*

Parameter: biosVfCPUFrequencyFloor

Type: UCSBiosVfCPUFrequencyFloor or None

Description: *none*

Parameter: biosVfCPUTPerformance

Type: UCSBiosVfCPUTPerformance or None

Description: *none*

Parameter: biosVfCPUTPowerManagement

Type: UCSBiosVfCPUTPowerManagement or None

Description: *none*

Parameter: biosVfDCUPrefetch

Type: UCSBiosVfDCUPrefetch or None

Description: *none*

Parameter: biosVfDemandScrub

Type: UCSBiosVfDemandScrub or None

Description: *none*

Parameter: biosVfDirectCacheAccess

Type: UCSBiosVfDirectCacheAccess or None

Description: *none*

Parameter: biosVfDRAMClockThrottling

Type: UCSBiosVfDRAMClockThrottling or None

Description: *none*

Parameter: biosVfDramRefreshRate

Type: UCSBiosVfDramRefreshRate or None

Description: *none*

Parameter: biosVfEnhancedIntelSpeedStepTech

Type: UCSBiosVfEnhancedIntelSpeedStepTech or None

Description: *none*

Parameter: biosVfExecuteDisableBit

Type: UCSBiosVfExecuteDisableBit or None

Description: *none*

Parameter: biosVfFRB2Enable

Type: UCSBiosVfFRB2Enable or None

Description: *none*

Parameter: biosVfHardwarePrefetch

Type: UCSBiosVfHardwarePrefetch or None

Description: *none*

Parameter: biosVfIntelTurboBoostTech

Type: UCSBiosVfIntelTurboBoostTech or None

Description: *none*

Parameter: biosVfIntelVirtualizationTechnology

Type: UCSBiosVfIntelVirtualizationTechnology or None

Description: *none*

Parameter: biosVfIntelVTForDirectedIO

Type: UCSBiosVfIntelVTForDirectedIO or None

Description: *none*

Parameter: biosVfLegacyUSBSupport

Type: UCSBiosVfLegacyUSBSupport or None

Description: *none*

Parameter: biosVfLOMPortOptionROM

Type: UCSBiosVfLOMPortOptionROM or None

Description: *none*

Parameter: biosVfLvDIMMSupport

Type: UCSBiosVfLvDIMMSupport or None

Description: *none*

Parameter: biosVfMemoryInterleave

Type: UCSBiosVfMemoryInterleave or None

Description: *none*

Parameter: biosVfMemoryMappedIOAbove4GB

Type: UCSBiosVfMemoryMappedIOAbove4GB or None

Description: *none*

Parameter: biosVfNUMAOptimized

Type: UCSBiosVfNUMAOptimized or None

Description: *none*

Parameter: biosVfOnboardStorage

Type: UCSBiosVfOnboardStorage or None

Description: *none*

Parameter: biosVfOnboardStorageSWStack

Type: UCSBiosVfOnboardStorageSWStack or None

Description: *none*

Parameter: biosVfOSBootWatchdogTimer

Type: UCSBiosVfOSBootWatchdogTimer or None

Description: *none*

Parameter: biosVfOSBootWatchdogTimerPolicy

Type: UCSBiosVfOSBootWatchdogTimerPolicy or None

Description: *none*

Parameter: biosVfOSBootWatchdogTimerTimeout

Type: UCSBiosVfOSBootWatchdogTimerTimeout or None

Description: *none*

Parameter: biosVfPatrolScrub

Type: UCSBiosVfPatrolScrub or None

Description: *none*

Parameter: biosVfPCIOptionROMs

Type: UCSBiosVfPCIOptionROMs or None

Description: *none*

Parameter: biosVfPCISlotOptionROMEnable

Type: UCSBiosVfPCISlotOptionROMEnable or None

Description: *none*

Parameter: biosVfProcessorC1E

Type: UCSBiosVfProcessorC1E or None

Description: *none*

Parameter: biosVfProcessorC6Report

Type: UCSBiosVfProcessorC6Report or None

Description: *none*

Parameter: biosVfPStateCoordType

Type: UCSBiosVfPStateCoordType or None

Description: *none*

Parameter: biosVfQPIConfig

Type: UCSBiosVfQPIConfig or None

Description: *none*

Parameter: biosVfSelectMemoryRASConfiguration

Type: UCSBiosVfSelectMemoryRASConfiguration or None

Description: *none*

Parameter: biosVfTPMSupport

Type: UCSBiosVfTPMSupport or None

Description: *none*

Parameter: biosVfUCSMBootOrderRuleControl

Type: UCSBiosVfUCSMBootOrderRuleControl or None

Description: *none*

Parameter: biosVfUSBEmulation

Type: UCSBiosVfUSBEmulation or None

Description: *none*

Parameter: biosVfUSBPortsConfig

Type: UCSBiosVfUSBPortsConfig or None

Description: *none*

Parameter: biosVfVgaPriority

Type: UCSBiosVfVgaPriority or None

Description: *none*

5.2.644 UCSBiosVfAdjacentCacheLinePrefetch : UCSBase**parent :** UCSBase**Parameter:** vpAdjacentCacheLinePrefetch**Type:** string**Description:** Adjacent cache line prefetch**5.2.645 UCSBiosVfAltitude : UCSBase****parent :** UCSBase**Parameter:** vpAltitude**Type:** string**Description:** Altitude**5.2.646 UCSBiosVfASPMsupport : UCSBase****parent :** UCSBase**Parameter:** vpASPMsupport**Type:** string**Description:** ASPM support**5.2.647 UCSBiosVfConsoleRedirection : UCSBase****parent :** UCSBase**Parameter:** vpBaudRate**Type:** string**Description:** Baud rate**Parameter:** vpConsoleRedirection**Type:** string**Description:** Console redirection**Parameter:** vpFlowControl**Type:** string**Description:** Flow control**Parameter:** vpPuttyKeyPad**Type:** string**Description:** Putty key pad**Parameter:** vpRedirectionAfterPOST**Type:** string**Description:** Redirection after POST**Parameter:** vpTerminalType**Type:** string**Description:** Terminal type**5.2.648 UCSBiosVfCoreMultiProcessing : UCSBase****parent :** UCSBase**Parameter:** vpCoreMultiProcessing**Type:** string

Description: Core multi processing

5.2.649 UCSBiosVfCPUEnergyPerformance : UCSBase

parent : UCSBase

Parameter: vpCPUEnergyPerformance

Type: string

Description: CPU energy performance

5.2.650 UCSBiosVfCPUFrequencyFloor : UCSBase

parent : UCSBase

Parameter: vpCPUFrequencyFloor

Type: string

Description: CPU frequency floor

5.2.651 UCSBiosVfCPUPerformance : UCSBase

parent : UCSBase

Parameter: vpCPUPerformance

Type: string

Description: CPU performance

5.2.652 UCSBiosVfCPUPowerManagement : UCSBase

parent : UCSBase

Parameter: vpCPUPowerManagement

Type: string

Description: CPU power management

5.2.653 UCSBiosVfDCUPrefetch : UCSBase

parent : UCSBase

Parameter: vpIPPrefetch

Type: string

Description: IP prefetch

Parameter: vpStreamerPrefetch

Type: string

Description: Streamer prefetch

5.2.654 UCSBiosVfDemandScrub : UCSBase

parent : UCSBase

Parameter: vpDemandScrub

Type: string

Description: Demand scrub

5.2.655 UCSBiosVfDirectCacheAccess : UCSBase

parent : UCSBase

Parameter: vpDirectCacheAccess

Type: string

Description: Direct cache access

5.2.656 UCSBiosVfDRAMClockThrottling : UCSBase**parent :** UCSBase**Parameter:** vpDRAMClockThrottling**Type:** string**Description:** DRAM clock throttling**5.2.657** UCSBiosVfDramRefreshRate : UCSBase**parent :** UCSBase**Parameter:** vpDramRefreshRate**Type:** string**Description:** Dram refresh rate**5.2.658** UCSBiosVfEnhancedIntelSpeedStepTech : UCSBase**parent :** UCSBase**Parameter:** vpEnhancedIntelSpeedStepTech**Type:** string**Description:** Enhanced intel speed step tech**5.2.659** UCSBiosVfExecuteDisableBit : UCSBase**parent :** UCSBase**Parameter:** vpExecuteDisableBit**Type:** string**Description:** Execute disable bit**5.2.660** UCSBiosVfFRB2Enable : UCSBase**parent :** UCSBase**Parameter:** vpFRB2Enable**Type:** string**Description:** FR b2 enable**5.2.661** UCSBiosVfHardwarePrefetch : UCSBase**parent :** UCSBase**Parameter:** vpHardwarePrefetch**Type:** string**Description:** Hardware prefetch**5.2.662** UCSBiosVfIntelHyperThreadingTech : UCSBase**parent :** UCSBase**Parameter:** vpIntelHyperThreadingTech**Type:** string**Description:** Intel hyper threading tech**5.2.663** UCSBiosVfIntelTurboBoostTech : UCSBase**parent :** UCSBase**Parameter:** vpIntelTurboBoostTech**Type:** string**Description:** Intel turbo boost tech

5.2.664 UCSBiosVfIntelVirtualizationTechnology : UCSBase**parent :** UCSBase**Parameter:** vpIntelVirtualizationTechnology**Type:** string**Description:** Intel virtualization technology**5.2.665 UCSBiosVfIntelVTForDirectedIO : UCSBase****parent :** UCSBase**Parameter:** vpIntelVTDATSSupport**Type:** string**Description:** Intel VTDATS support**Parameter:** vpIntelVTDCoherencySupport**Type:** string**Description:** Intel VTD coherency support**Parameter:** vpIntelVTForDirectedIO**Type:** string**Description:** Intel VT for directed IO**5.2.666 UCSBiosVfLegacyUSBSupport : UCSBase****parent :** UCSBase**Parameter:** vpLegacyUSBSupport**Type:** string**Description:** Legacy USB support**5.2.667 UCSBiosVfLOMPortOptionROM : UCSBase****parent :** UCSBase**Parameter:** vpLOMPort0State**Type:** string**Description:** LOM port0 state**Parameter:** vpLOMPort1State**Type:** string**Description:** LOM port1 state**Parameter:** vpLOMPortsAllState**Type:** string**Description:** LOM ports all state**5.2.668 UCSBiosVfLvDIMMSupport : UCSBase****parent :** UCSBase**Parameter:** vpLvDDRMode**Type:** string**Description:** Lv DDR mode**5.2.669 UCSBiosVfMemoryInterleave : UCSBase****parent :** UCSBase**Parameter:** vpChannelInterLeave

Type: string
Description: Channel inter leave

Parameter: vpRankInterLeave
Type: string
Description: Rank inter leave

5.2.670 UCSBiosVfMemoryMappedIOAbove4GB : UCSBase

parent : UCSBase
Parameter: vpMemoryMappedIOAbove4GB
Type: string
Description: Memory mapped IO above 4GB

5.2.671 UCSBiosVfNUMAOptimized : UCSBase

parent : UCSBase
Parameter: vpNUMAOptimized
Type: string
Description: NUMA optimized

5.2.672 UCSBiosVfOnboardStorageSWStack : UCSBase

parent : UCSBase
Parameter: vpOnboardSCUStorageSWStack
Type: string
Description: Onboard SCU storage SW stack

5.2.673 UCSBiosVfOnboardStorage : UCSBase

parent : UCSBase
Parameter: vpOnboardSCUStorageSupport
Type: string
Description: Onboard SCU storage support

5.2.674 UCSBiosVfOSBootWatchdogTimerPolicy : UCSBase

parent : UCSBase
Parameter: vpOSBootWatchdogTimerPolicy
Type: string
Description: OS boot watchdog timer policy

5.2.675 UCSBiosVfOSBootWatchdogTimer : UCSBase

parent : UCSBase
Parameter: vpOSBootWatchdogTimer
Type: string
Description: OS boot watchdog timer

5.2.676 UCSBiosVfOSBootWatchdogTimerTimeout : UCSBase

parent : UCSBase
Parameter: vpOSBootWatchdogTimerTimeout
Type: string
Description: OS boot watchdog timer timeout

5.2.677 UCSBiosVfPatrolScrub : UCSBase**parent :** UCSBase**Parameter:** vpPatrolScrub**Type:** string**Description:** Patrol scrub**5.2.678 UCSBiosVfPCIOptionROMs : UCSBase****parent :** UCSBase**Parameter:** vpPCIOptionROMs**Type:** string**Description:** PCI option ROMs**5.2.679 UCSBiosVfPCISlotOptionROMEnable : UCSBase****parent :** UCSBase**Parameter:** vpSlot1LinkSpeed**Type:** string**Description:** Slot1 link speed**Parameter:** vpSlot1State**Type:** string**Description:** Slot1 state**Parameter:** vpSlot2LinkSpeed**Type:** string**Description:** Slot2 link speed**Parameter:** vpSlot2State**Type:** string**Description:** Slot2 state**Parameter:** vpSlotMezzState**Type:** string**Description:** Slot mezz state**5.2.680 UCSBiosVfProcessorC1E : UCSBase****parent :** UCSBase**Parameter:** vpProcessorC1E**Type:** string**Description:** Processor c1 e**5.2.681 UCSBiosVfProcessorC6Report : UCSBase****parent :** UCSBase**Parameter:** vpProcessorC6Report**Type:** string**Description:** Processor c6 report**5.2.682 UCSBiosVfPStateCoordType : UCSBase****parent :** UCSBase**Parameter:** vpPStateCoordType

Type: string

Description: P state coord type

5.2.683 UCSBiosVfQPIConfig : UCSBase

parent : UCSBase

Parameter: vpQPILinkFrequency

Type: string

Description: QPI link frequency

5.2.684 UCSBiosVfSelectMemoryRASConfiguration : UCSBase

parent : UCSBase

Parameter: vpSelectMemoryRASConfiguration

Type: string

Description: Select memory RAS configuration

5.2.685 UCSBiosVfTPMSupport : UCSBase

parent : UCSBase

Parameter: vpTPMSupport

Type: string

Description: TPM support

5.2.686 UCSBiosVfUCSMBootOrderRuleControl : UCSBase

parent : UCSBase

Parameter: vpUCSMBootOrderRule

Type: string

Description: UCSM boot order rule

5.2.687 UCSBiosVfUSBEmulation : UCSBase

parent : UCSBase

Parameter: vpUSBEmul6064

Type: string

Description: USB Emulation Support

5.2.688 UCSBiosVfUSBPortsConfig : UCSBase

parent : UCSBase

Parameter: vpAllUsbDevices

Type: string

Description: All usb devices

Parameter: vpUsbPortFront

Type: string

Description: Usb port front

Parameter: vpUsbPortInternal

Type: string

Description: Usb port internal

Parameter: vpUsbPortKVM

Type: string

Description: Usb port KVM

Parameter: vpUsbPortRear

Type: string

Description: Usb port rear

Parameter: vpUsbPortSDCard

Type: string

Description: Usb port SD card

Parameter: vpUsbPortVMedia

Type: string

Description: Usb port V media

5.2.689 UCSBiosVfVgaPriority : UCSBase

parent : UCSBase

Parameter: vpVgaPriority

Type: string

Description: Vga priority

5.2.690 UCSCommNtpProvider : UCSBase

parent : UCSBase

Parameter: description

Type: string

Description: Description

Parameter: ntpEnable

Type: string

Description: NTP enable

Parameter: ntpServer

Type: list of strings

Description: NTP server

5.2.691 UCSCommSyslogClient : UCSBase

parent : UCSBase

Parameter: adminState

Type: boolean

Description: Admin state

Parameter: hostname

Type: string

Description: Hostname

Parameter: name

Type: string

Description: Name

5.2.692 UCSCommSyslog : UCSBase**parent :** UCSBase**Parameter:** adminState**Type:** boolean**Description:** Admin state**Parameter:** descr**Type:** string**Description:** Descr**Parameter:** localSeverity**Type:** string**Description:** Local severity**Parameter:** name**Type:** string**Description:** Name**Parameter:** port**Type:** unsigned integer**Description:** Port**Parameter:** proto**Type:** string**Description:** Proto**Parameter:** remoteSeverity**Type:** string**Description:** Remote severity**Parameter:** commSyslogClientPrimary**Type:** UCSCommSyslogClient or None**Description:** *none***Parameter:** commSyslogClientSecondary**Type:** UCSCommSyslogClient or None**Description:** *none***5.2.693** UCSEquipmentIndicatorLed : UCSBase**parent :** UCSBase**Parameter:** color**Type:** string**Description:** Color**Parameter:** id**Type:** unsigned integer

Description: Id

Parameter: name

Type: string

Description: Name

Parameter: operState

Type: string

Description: Oper state

5.2.694 UCSEquipmentLocatorLed : UCSBase

parent : UCSBase

Parameter: adminState

Type: string

Description: Admin state

Parameter: color

Type: string

Description: Color

Parameter: id

Type: unsigned integer

Description: Id

Parameter: name

Type: string

Description: Name

Parameter: operState

Type: string

Description: Oper state

5.2.695 UCSFaultInst : UCSBase

parent : UCSBase

Parameter: ack

Type: string

Description: Ack

Parameter: cause

Type: string

Description: Cause

Parameter: code

Type: string

Description: Code

Parameter: created

Type: string

Description: Created

Parameter: descr

Type: string

Description: Descr

Parameter: affectedDN

Type: string

Description: Affected DN

Parameter: highestSeverity

Type: string

Description: Highest severity

Parameter: id

Type: unsigned integer

Description: Id

Parameter: lastTransition

Type: string

Description: Last transition

Parameter: lc

Type: string

Description: Lc

Parameter: occur

Type: unsigned integer

Description: Occur

Parameter: origSeverity

Type: string

Description: Orig severity

Parameter: prevSeverity

Type: string

Description: Prev severity

Parameter: rule

Type: string

Description: Rule

Parameter: severity

Type: string

Description: Severity

Parameter: tags

Type: string
Description: Tags

Parameter: type
Type: string
Description: Type

5.2.696 UCSFirmwareRunning : UCSBase

parent : UCSBase
Parameter: type
Type: string
Description: Type

Parameter: deployment
Type: string
Description: Deployment

Parameter: version
Type: string
Description: Version

5.2.697 UCSInfo : UCSBase

parent : UCSBase
Parameter: ucsDeviceType
Type: integer
Description: *none*

Parameter: profileName
Type: string
Description: *none*

Parameter: ntpSettings
Type: UCSCommNtpProvider or None
Description: *none*

Parameter: syslogSettings
Type: UCSCommSyslog or None
Description: *none*

Parameter: biosSettings
Type: UCSBiosSettings or None
Description: *none*

Parameter: lsbootDef
Type: UCSSLsbootDef or None
Description: *none*

Parameter: biosBootOrder

Type: list of UCSBiosBootDevGrp

Description: *none*

Parameter: vicAdapterSettings

Type: list of UCSAdaptorHostEthIf

Description: *none*

Parameter: fcAdapterSettings

Type: list of UCSAdaptorHostFcIf

Description: *none*

Parameter: ucsStatus

Type: UCSStatus or None

Description: *none*

Parameter: firmwareRunning

Type: list of UCSFirmwareRunning

Description: *none*

Parameter: vicPhysicalInterfaces

Type: list of UCSAdaptorExtEthIf

Description: *none*

5.2.698 UCSLogs : UCSBase

parent : UCSBase

Parameter: faultInst

Type: list of UCSFaultInst

Description: *none*

5.2.699 UCSLsbootDef : UCSBase

parent : UCSBase

Parameter: name

Type: string

Description: Boot policy

Parameter: purpose

Type: string

Description: Purpose

Parameter: rebootOnUpdate

Type: string

Description: Reboot on update

Parameter: lsbootVirtualMedia

Type: list of UCSLsbootVirtualMedia

Description: *none*

Parameter: lsbootLan

Type: list of UCSLsbootLan

Description: *none*

Parameter: lsbootStorage

Type: list of UCSLsbootStorage

Description: *none*

Parameter: lsbootEfi

Type: list of UCSLsbootEfi

Description: *none*

5.2.700 UCSLsbootEfi : UCSBase

parent : UCSBase

Parameter: order

Type: unsigned integer

Description: Boot order

Parameter: access

Type: string

Description: Access type

Parameter: type

Type: string

Description: Device type

5.2.701 UCSLsbootLan : UCSBase

parent : UCSBase

Parameter: order

Type: unsigned integer

Description: Boot order

Parameter: access

Type: string

Description: Access type

Parameter: type

Type: string

Description: Device type

Parameter: prot

Type: string

Description: Protocol

5.2.702 UCSLsbootStorage : UCSBase

parent : UCSBase

Parameter: order

Type: unsigned integer

Description: Boot order

Parameter: access

Type: string

Description: Access type

Parameter: type

Type: string

Description: Device type

5.2.703 UCSLsbootVirtualMedia : UCSBase

parent : UCSBase

Parameter: order

Type: unsigned integer

Description: Boot order

Parameter: access

Type: string

Description: Access type

Parameter: type

Type: string

Description: Device type

5.2.704 UCSStatus : UCSBase

parent : UCSBase

Parameter: model

Type: string

Description: *none*

Parameter: serial

Type: string

Description: *none*

Parameter: uuid

Type: string

Description: *none*

Parameter: vendor

Type: string

Description: *none*

Parameter: equipmentLocatorLed

Type: UCSEquipmentLocatorLed or None

Description: *none*

Parameter: equipmentIndicatorLed

Type: list of UCSEquipmentIndicatorLed

Description: *none*

5.2.705 UGECgroupsSettings : WlmCgroupsSettings

parent : WlmCgroupsSettings

Parameter: enabled

Type: boolean

Description: If true then settings are configured

Parameter: cpuset

Type: boolean

Description: If true then UGE puts the job into a cpuset cgroup with the specific CPU ids assigned

Parameter: freezer

Type: boolean

Description: If true than the whole job is frozen by the kernel

Parameter: freezePeTasks

Type: boolean

Description: If false then slave tasks are not put in the freezer, otherwise all slave tasks are frozen (also slaves on remote hosts)

Parameter: killing

Type: boolean

Description: If true then UGE signals all processes forked/started by the job until all of them are killed

Parameter: forcedNuma

Type: boolean

Description: If true then on NUMA machines only local memory is allowed to be used when the job requested memory allocation with -mbind cores:strict

Parameter: vmemLimit

Type: boolean

Description: Specifies if virtual memory can be limited with cgroups (h_vmem_limit)

Parameter: memFreeHard

Type: boolean

Description: If true then kernel ensures that the job does not use more main memory than required (m_mem_free_hard)

Parameter: memFreeSoft

Type: boolean

Description: If true (and hard memory limit is turned off) then the requested memory with m_mem_free is a soft limit (m_mem_free_soft)

Parameter: minMemoryLimit

Type: string

Description: A host based minimum memory limit, in bytes or values like 10M, 1G (min_memory_limit)

Parameter: jobCgroupTemplate

Type: string

Description: Template for job cgroup path (\$JOBID will be replaced to job id)

Parameter: options

Type: list of strings

Description: Additional UGE cgroup options

Parameter: devices

Type: list of strings

Description: Configurations for cgroup devices

5.2.706 UGEClientRole : UGERole

parent : UGERole

Parameter: execHost

Type: boolean

Description: Specifies if host is allowed to run Grid Engine jobs

Parameter: adminHost

Type: boolean

Description: Specifies if host is administrative one

Parameter: slots

Type: string

Description: Number of slots available on this node/category

Parameter: queues

Type: list of references to UGEJobQueue

Description: Queues this node/nodes in this category belongs to

Parameter: allQueues

Type: boolean

Description: When set, the role will provide all available queues. (The queues property will then be ignored.)

Parameter: gpus

Type: unsigned integer

Description: Number of gpus

Parameter: gpuDevices

Type: list of strings

Description: Custom gpu RSMAP

Parameter: micDevices

Type: list of strings

Description: Custom phi RSMAP

Parameter: cgroups

Type: UGECgroupsSettings

Description: Submode containing UGE related cgroups settings

Parameter: nodeCustomizations

Type: list of WlmNodeCustomizationEntry

Description: Grid Engine node custom properties

Parameter: prolog

Type: string

Description: Path to prolog script that is configured at local level (e.g. root@/cm/local/apps/cmd/scripts/prolog)

Parameter: epilog

Type: string

Description: Path to epilog script that is configured at global level

5.2.707 UGEJobQueueStat : GridEngineJobQueueStat

parent : GridEngineJobQueueStat

5.2.708 UGEJobQueue : GridEngineJobQueue

parent : GridEngineJobQueue

Parameter: pelist

Type: list of strings

Description: Parallel environments associated with queue

5.2.709 UGEJob : GridEngineJob

parent : GridEngineJob

5.2.710 UGEParallelEnvironment : GridEngineParallelEnvironment

parent : GridEngineParallelEnvironment

Parameter: daemonForksSlaves

Type: boolean

Description: Defines if every task of a tightly integrated parallel job gets started individually

Parameter: masterForksSlaves

Type: boolean

Description: Indicates if limits set for the master task are multiplied by the number of slots granted on the host

5.2.711 UGERole : Role

parent : Role

Parameter: wlmCluster

Type: reference to UGEWlmCluster

Description: WLM cluster link to this WLM role

5.2.712 UGEServerRole : UGERole

parent : UGERole

Parameter: externalServer

Type: boolean

Description: Grid Engine server daemon is running on some external machine

Parameter: prolog

Type: string

Description: Path to prolog script that is configured at global level

Parameter: epilog

Type: string

Description: Path to epilog script that is configured at global level

5.2.713 UGESubmitRole : Role

parent : Role

Parameter: ugeWlmClusters

Type: list of references to UGEWlmCluster

Description: List of UGE clusters which the role belongs to

5.2.714 UGEWlmCluster : WlmCluster

parent : WlmCluster

Parameter: parallelEnvironments

Type: list of UGEParallelEnvironment

Description: UGE Parallel Environments

Parameter: cgroups

Type: UGECgroupsSettings

Description: Submode containing UGE related cgroups settings

Parameter: placeholders

Type: list of JobQueuePlaceholder

Description: Job queue node placeholders mode

Parameter: prefix

Type: string

Description: UGE installation directory

Parameter: cell

Type: string

Description: UGE cell directory location

Parameter: version

Type: string

Description: Major UGE version

5.2.715 User : Entity

parent : Entity

Parameter: name

Type: string

Description: User Name

Parameter: ID

Type: string

Description: User ID number

Parameter: `commonName`

Type: string

Description: Full user name

Parameter: `surname`

Type: string

Description: Surname

Parameter: `groupID`

Type: string

Description: Base group of this user

Parameter: `loginShell`

Type: string

Description: Login shell

Parameter: `homeDirectory`

Type: string

Description: Home directory

Parameter: `password`

Type: string

Description: Password

Parameter: `homeDirOperation`

Type: boolean

Description: Set to true: to create or move home directory if needed

Parameter: `shadowMin`

Type: unsigned integer

Description: Indicates the minimum number of days required between password changes

Parameter: `shadowMax`

Type: unsigned integer

Description: Indicates the maximum number of days for which the user password remains valid.

Parameter: `shadowWarning`

Type: unsigned integer

Description: The number of days of advance warning given to the user before the user password expires

Parameter: `shadowInactive`

Type: unsigned integer

Description: Indicates the number of days of inactivity allowed for the user

Parameter: shadowLastChange

Type: unsigned integer

Description: Indicates the number of days between January 1, 1970 and the day when the user password was last changed

Parameter: shadowExpire

Type: unsigned integer

Description: Indicates the date on which the user login will be disabled

Parameter: email

Type: string

Description: email

Parameter: profile

Type: string

Description: Profile for Authorization

Parameter: certSerialNumber

Type: integer

Description: Serial number of certificate assigned to user

Parameter: projectManager

Type: ProjectManager or None

Description: Project manager

Parameter: notes

Type: string

Description: Administrator notes

Parameter: homePage

Type: string

Description: Home page

Parameter: information

Type: string

Description: Information added by CMDaemon

Parameter: writeSshProxyConfig

Type: boolean

Description: Write ssh proxy config

Parameter: extraFields

Type: list of strings

Description: *none*

Parameter: extraValues

Type: list of strings

Description: *none*

Parameter: extraReadable

Type: list of strings

Description: *none*

Parameter: extraDescriptions

Type: list of strings

Description: *none*

Parameter: extraDefaults

Type: list of strings

Description: *none*

5.2.716 Validation : Entity

parent : Entity

Parameter: code

Type: unsigned integer

Description: Code

Parameter: field

Type: string

Description: Field

Parameter: msg

Type: string

Description: Message

Parameter: warning

Type: integer

Description: Warning

5.2.717 VersionInfo : Entity

parent : Entity

Parameter: refPartitionUniqueKey

Type: unsigned integer

Description: Partition

Parameter: cmVersion

Type: string

Description: *none*

Parameter: cmdaemonVersion

Type: string

Description: *none*

Parameter: cmdaemonBuild

Type: string

Description: *none*

Parameter: databaseVersion

Type: integer

Description: *none*

5.2.718 VirtualNodeSettings : Entity

parent : Entity

5.2.719 VirtualNode : ComputeNode

parent : ComputeNode

Parameter: virtualNodeSettings

Type: OpenStackSettings

Description: Submode containing all virtual node settings

5.2.720 VirtualSMPNode : ComputeNode

parent : ComputeNode

Parameter: disableVSMPNode

Type: boolean

Description: Disabled

Parameter: primaryNode

Type: reference to PhysicalNode

Description: Primary node of the virtual SMP group

Parameter: members

Type: list of references to PhysicalNode

Description: Nodes belonging to the virtual SMP group

Parameter: vsmpSettings

Type: VsmpSettings or None

Description: Submode containing all VSMP specific settings

5.2.721 VsmpSettings : Entity

parent : Entity

5.2.722 WillChange : Entity

parent : Entity

Parameter: changeBaseType

Type: string

Description: Base type

Parameter: key

Type: unsigned integer

Description: Key

Parameter: parameter

Type: string

Description: Parameter

Parameter: autoChange

Type: integer

Description: Auto change

5.2.723 WlmCgroupsSettings : Entity

parent : Entity

Parameter: mountPoint

Type: string

Description: Where cgroups is mounted

Parameter: autoMount

Type: boolean

Description: If true then workload manager tries to mount a subsystem if it is not mounted yet

5.2.724 WlmCluster : Entity

parent : Entity

Parameter: name

Type: string

Description: Name

Parameter: moduleFileTemplate

Type: string

Description: Template content for system module file

Parameter: primaryServer

Type: reference to Node or None

Description: The WLM primary server (where the active WLM daemon will be running). This parameter has no effect in HA setup controlled by Bright.

5.2.725 WlmNodeCustomizationEntry : Entity

parent : Entity

Parameter: key

Type: string

Description: Name of the key

Parameter: value

Type: string

Description: Value for the key

Parameter: enabled

Type: boolean

Description: Add the key/value to workload management node configuration or not

Parameter: notes

Type: string

Description: Administrator notes

5.3 JSON Examples

complete.sh

```
#!/bin/bash

URL=https://localhost:8081/json/
user=root
pass=secretrootpassword

echo "=====  
login  
====="
curl -c curl.cookie.txt -i -k -X POST -d \  
'{"service":"login", "username":"root", "password":"' $pass' }' $URL; echo

echo "=====  
master  
====="
curl --cookie curl.cookie.txt -i -k -X POST -d \  
'{"service":"cmdevice", "call":"getNode", "arg":"master"}' $URL; echo

echo "=====  
logout  
====="
curl --cookie curl.cookie.txt -i -k -X POST -d \  
'{"service":"logout"}' $URL; echo

echo "=====  
denied  
====="
curl --cookie curl.cookie.txt -i -k -X POST -d \  
'{"service":"cmdevice", "call":"getNode", "arg":"master"}' $URL; echo
rm -f curl.cookie.txt

echo "=====  
cert  
====="
curl --cert $HOME/.cm/admin.pem --key $HOME/.cm/admin.key -i -k -X POST -d \  
'{"service":"cmdevice", "call":"getNode", "arg":"master"}' $URL; echo
```

curl.sh

```
#!/bin/bash

URL=https://localhost:8081/json/

if [ -z "$1" ]; then
    read -p "pass: " -s pass
else
    pass=$1
fi

curl -c curl.cookie.txt -i -k -X POST -d \  
'{"service":"login", "username":"root", "password":"' $pass' }' $URL

# curl --cookie curl.cookie.txt -i -k -X POST -d \  
'{"service":"cmsession", "call":"getLastEvents", "args":[0,256]}' $URL

curl --cookie curl.cookie.txt -i -k -X POST -d \  
'{"service":"cmmain", "call":"getProfile"}' $URL

curl --cookie curl.cookie.txt -i -k -X POST -d \  
'{"service":"cmmain", "call":"getSubjectName"}' $URL
```

devices.sh

```
#!/bin/bash
URL=https://localhost:8081/json/

if [ "$1" == "gzip" ]; then
    wget --certificate=$HOME/.cm/admin.pem --private-key=$HOME/.cm/admin.key \
        --header='Accept-Encoding: gzip' \
        --no-check-certificate --server-response -q0- $URL \
        --post-data='{"service":"cmdevice","call":"getDevices"}'
else
    wget --certificate=$HOME/.cm/admin.pem --private-key=$HOME/.cm/admin.key --no-check-certificate \
        --server-response -q0- $URL --post-data='{"service":"cmdevice","call":"getDevices"}'
fi
```

Tip: run as `./devices.sh | python -mjson.tool`.

loadone.sh

```
#!/bin/bash
URL=https://localhost:8081/json/

# not perfect but gets the job done
function jsonval {
    temp=`echo $json | sed 's/\\\\\\\\\\\\/\\/g' | sed 's/[{}]/g' | awk -v k="text" '{n=split($0,a,",");
    for (i=1; i<=n; i++) print a[i]}'| sed 's/\\/":\\"/\\/g' | sed 's/[\\,]/ /g' | sed 's/\\/"/g' | grep -w
    $prop`
    r=$(echo ${temp##*}| tr ']' ' ' | tr ' ' '\n' | cut -d: -f2 | sort -n)
    echo $(echo $r | cut -d' ' -f 1)
}

prop='uniqueKey'

node=master
json=`wget --certificate=$HOME/.cm/admin.pem --private-key=$HOME/.cm/admin.key --no-check-certificate \
--server-response -q0- $URL --post-data='{"service":"cmdevice","call":"getDevice","arg":'$node'}'`
nkey=$(jsonval)
if [ -z $nkey ]; then
    echo $json
    exit 1
fi
echo "$node.uniqueKey = $nkey"

json=`wget --certificate=$HOME/.cm/admin.pem --private-key=$HOME/.cm/admin.key \
--no-check-certificate --server-response -q0- $URL \
--post-data='{"service":"cmmon","call":"getMonitoringMeasurable","name":"LoadOne"}'`
mkey=$(jsonval)
echo "loadone.uniqueKey = $mkey"

now=$(date +%s)
day=$((now-86400))
echo "now is $now"
echo "day is $day"

cat <<EOF > /tmp/plot.json
{ "service" : "cmmon",
  "call" : "plot",
```

```

    "request" : { "entities" : [$nkey],
                  "measurables" : [$mkey],
                  "intervals" : 25,
                  "rangeStart" : $((day*1000)),
                  "rangeEnd" : $((now*1000))
                }
  }
}
EOF
wget --certificate=$HOME/.cm/admin.pem --private-key=$HOME/.cm/admin.key \
--no-check-certificate -q0- https://master:8081/json --post-file=/tmp/plot.json | \
python -mjson.tool

```

login.sh

```

#!/bin/bash
URL=https://localhost:8081/json/
user=$USER
pass=secretpassword
wget --keep-session-cookies --save-cookies cookie.txt --no-check-certificate \
--server-response -q0- $URL --post-data='{"service":"login","username":"'$user'","password":"'$pass'"}'
echo

```

logout.sh

```

#!/bin/bash
URL=https://localhost:8081/json/
wget --load-cookies cookie.txt --no-check-certificate --server-response -q0- $URL \
--post-data='{"service":"logout"}'
rm cookie.txt
echo

```

node001.sh

```

#!/bin/bash
URL=https://localhost:8081/json/

if [ -z "$1" ]; then
    node=node001
else
    node=$1
fi

wget --certificate=$HOME/.cm/admin.pem --private-key=$HOME/.cm/admin.key \
--no-check-certificate --server-response -q0- $URL \
--post-data='{"service":"cmdevice","call":"getDevice","arg":"'$node'"}' | python -mjson.tool

```

basic_information.sh

```

#!/bin/bash
URL=https://localhost:8081/json/
wget --certificate=$HOME/.cm/admin.pem --private-key=$HOME/.cm/admin.key \
--no-check-certificate --server-response -q0- $URL \
--post-data='{"service":"cmpart","call":"getBasicEntityInformation"}'

```

push_to_CMDaemon.sh

In the following example, the health check ManagedServicesOK, is pushed to CMDaemon with a FAIL value.

Example

```
[root@bright90 ~]# cat push_to_CMDaemon.sh
#!/bin/bash
URL='https://master:8081/monitoring/push/ManagedServicesOk?info=bro1&class=Push/Single&healthcheck=yes '
value='FAIL'
curl --cert $HOME/.cm/admin.pem --key $HOME/.cm/admin.key -i -k -X POST -d "$value" $URL; echo
```

Its behavior can be verified by checking the latest value for ManagedServicesOK before and after the push_to_CMDaemon.sh script is run:

Example

```
[root@bright90 ~]# curl --cert ~/.cm/admin.pem --key ~/.cm/admin.key -k
"https://master:8081/rest/v1/monitoring/latest?measurable=ManagedServicesOK&entity=bright90&indent=1"
{
  "data": [
    {
      "age": 89.735,
      "entity": "bright90",
      "measurable": "ManagedServicesOk",
      "raw": 0.0,
      "time": 1586450030968,
      "value": "PASS"
    }
  ]
}
```

```
[root@bright90 ~]# ./push_to_CMDaemon.sh
HTTP/1.1 200 OK
Content-Length: 55
Content-Type: application/json
```

```
{
  "values": {
    "added": 1,
    "provided": 1
  }
}
[root@bright90 ~]# curl --cert ~/.cm/admin.pem --key ~/.cm/admin.key -k
"https://master:8081/rest/v1/monitoring/latest?measurable=ManagedServicesOK&entity=bright90&indent=1"
{
  "data": [
    {
      "age": 3.357,
      "entity": "bright90",
      "info": "bro1",
      "measurable": "ManagedServicesOk",
      "raw": 2.0,
      "time": 1586450124437,
      "value": "FAIL"
    }
  ]
}
```

A metric version of the push, using the measurable push-test-02 might look like:

```
#!/bin/bash
URL='https://localhost:8081/monitoring/push/push-test-02?info=bro1&class=Push/Single&unit=s'
value=$(date +%s)
curl --cert $HOME/.cm/admin.pem --key $HOME/.cm/admin.key -i -k -X POST -d "$value" $URL; echo
```

A collection can be pushed as follows: To initialize (once):

```
#!/bin/bash
URL='https://localhost:8081/monitoring/initialize'
curl --cert $HOME/.cm/admin.pem --key $HOME/.cm/admin.key -i -k -X POST -d \
'[
  {"metric":"push-collection-01","class":"Push/Collection"},
  {"metric":"push-collection-02","class":"Push/Collection"}
]' $URL; echo
```

After initializing, sampling can be done with:

```
#!/bin/bash
URL='https://localhost:8081/monitoring/push'
curl --cert $HOME/.cm/admin.pem --key $HOME/.cm/admin.key -i -k -X POST -d \
'[
  {"metric":"push-collection-01","value":31},
  {"metric":"push-collection-02","value":32,"info":"Some message"}
]' $URL; echo
```