



Trove – Database as a Service

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TROVE

1. Launch database
2. A virtual machine is created
3. The machine is automatically configured to be a database server
4. Database is ready to be used in about 10 minutes

Launch Instance

Details * Initialize Databases Advanced

Availability Zone
Any Availability Zone

Instance Name *
trove-database

Volume Size * ?
1

Volume Type ?
standard

Datastore * ?
mysql - 5.6

Flavor ?
m2.medium

Locality ?
None

Specify the details for launching an instance.
Please note: The value specified in the Volume Size field should be greater than 0, however, some configurations do not support specifying volume size. If specifying the volume size results in an error stating volume support is not enabled, enter 0.

CANCEL LAUNCH

TROVE

mysql

cassandra
couchbase
couchdb
db2
mariadb
mongodb
percona
postgresql
pxc
redis
vertica

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CANCEL LAUNCH

MY WORK

Project

API Access

Compute

Volumes

Network

Database

Instances

Backups

Clusters

Configuration Groups

Object Store

Admin

Identity

Project / Database / Instances

Instances

Launch Instance

Delete Instances

Displaying 3 items

<input type="checkbox"/>	Instance Name	Datastore	Datastore Version	Host	Size	Volume Size	Status	Actions
<input type="checkbox"/>	puppet_trove_test_2	mysql	5.6	Not Assigned	db256M 256MB RAM	1GB	Active	Create Backup
<input type="checkbox"/>	trove_test	mysql	5.6	Not Assigned	ds512M 512MB RAM	1GB	Active	Create Backup
<input type="checkbox"/>	puppet_trove_test	mysql	5.6	Not Assigned	db256M 256MB RAM	1GB	Active	Create Backup

Displaying 3 items

MY WORK

DEVSTACK VM

Nova

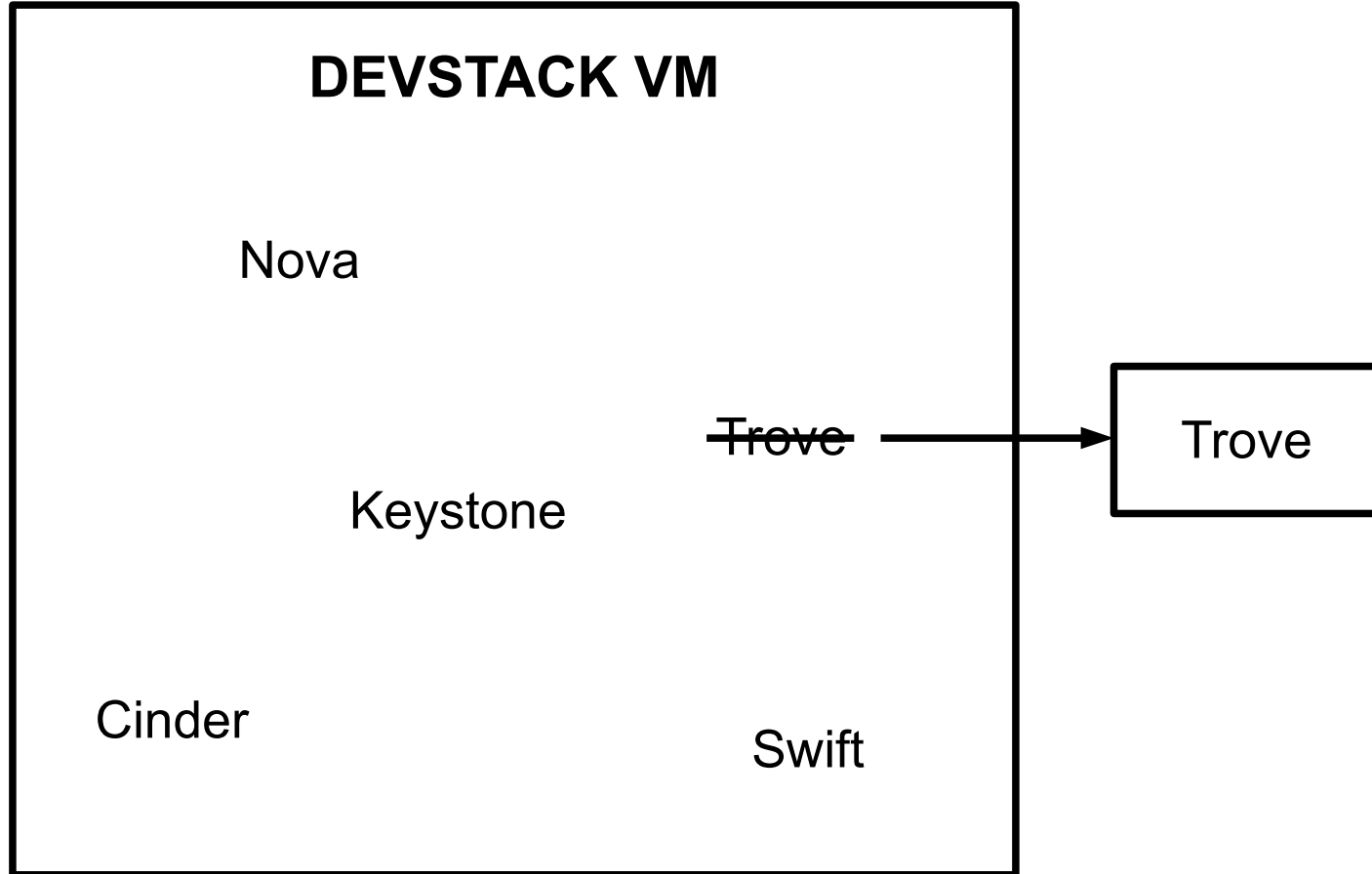
Trove

Keystone

Cinder

Swift

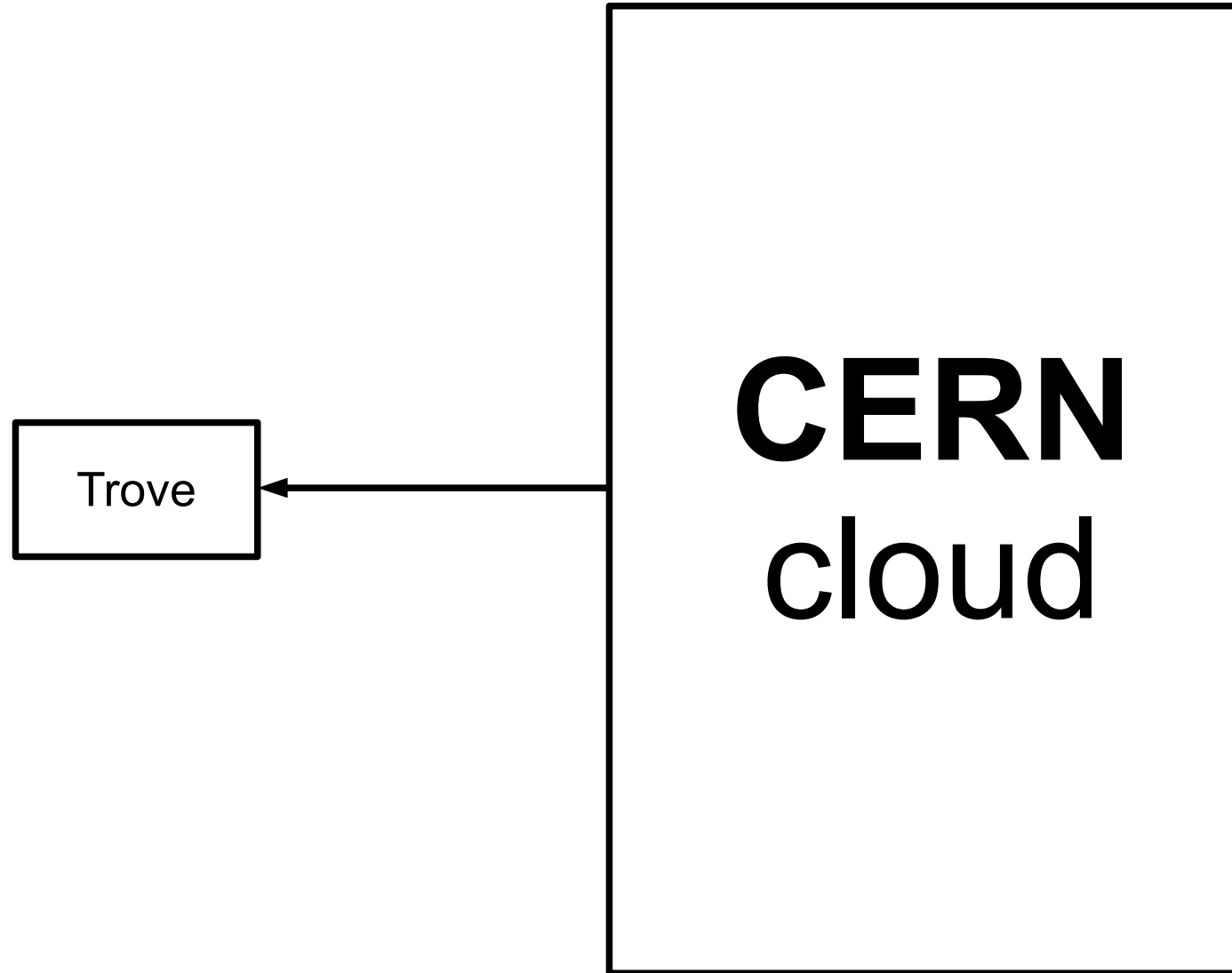
MY WORK



MY WORK

Trove

MY WORK



MY WORK



Cloud Database Service

Tools

Project

Compute

Container Infra

Orchestration

Database

Instances

Configuration Groups

App Catalog

Instances

LAUNCH INSTANCE

DELETE INSTANCES

Displaying 3 items

<input type="checkbox"/>	Instance Name	Datastore	Datastore Version	Host	Size	Volume Size	Status	Actions
<input type="checkbox"/>	th-benchmark-db-io1	mysql	ubuntu16.04-percona5.6	188.185.85.235	m2.large 7.3GB RAM	4GB	Shutdown	RESTART INSTANCE
<input type="checkbox"/>	th-benchmark-db-std	mysql	ubuntu16.04-percona5.6	188.185.79.37	m2.large 7.3GB RAM	4GB	Active	RESIZE VOLUME
<input type="checkbox"/>	test-database-please-ignore	mysql	5.6	188.185.73.166	m2.small 1.8GB RAM	1GB	Active	RESIZE VOLUME

Displaying 3 items

BENCHMARKING

BENCHMARKING

Standard volume storage: 100 IOPS

BENCHMARKING

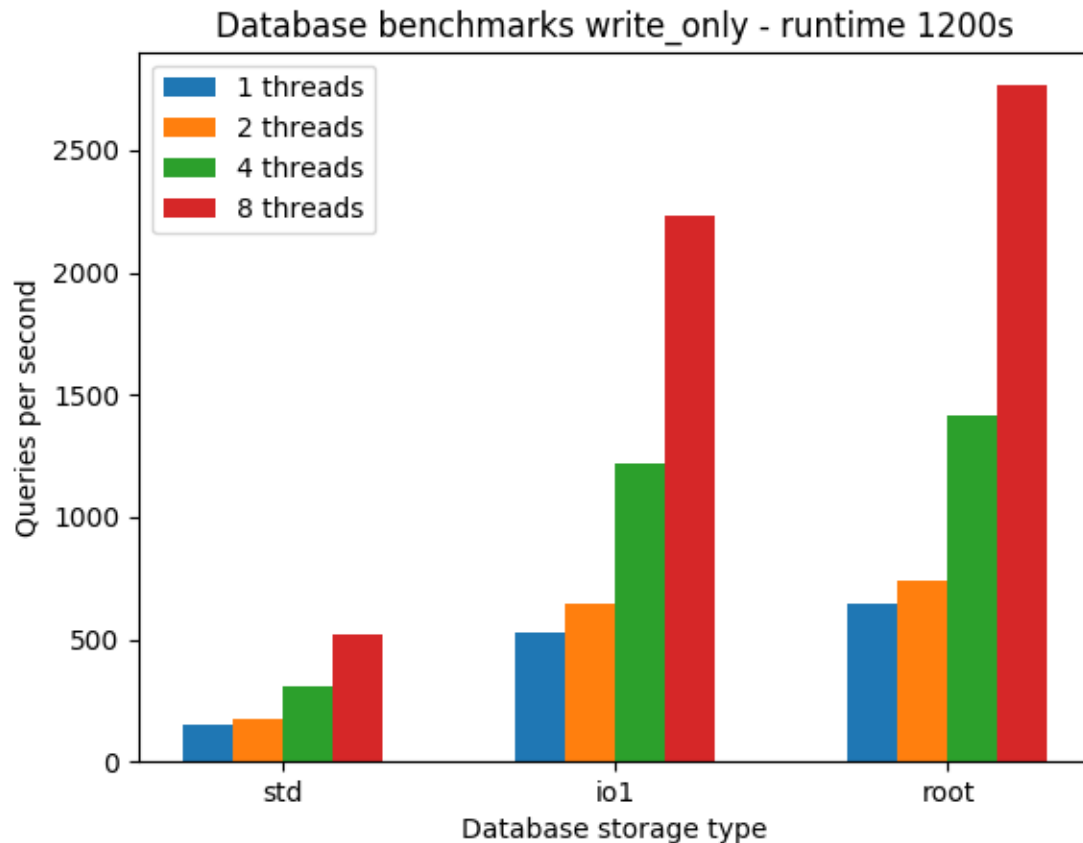
Standard volume storage:	100 IOPS
io1 volume storage:	500 IOPS

BENCHMARKING

Standard volume storage:	100 IOPS
io1 volume storage:	500 IOPS
Local SSD storage:	1000+ IOPS

BENCHMARKING

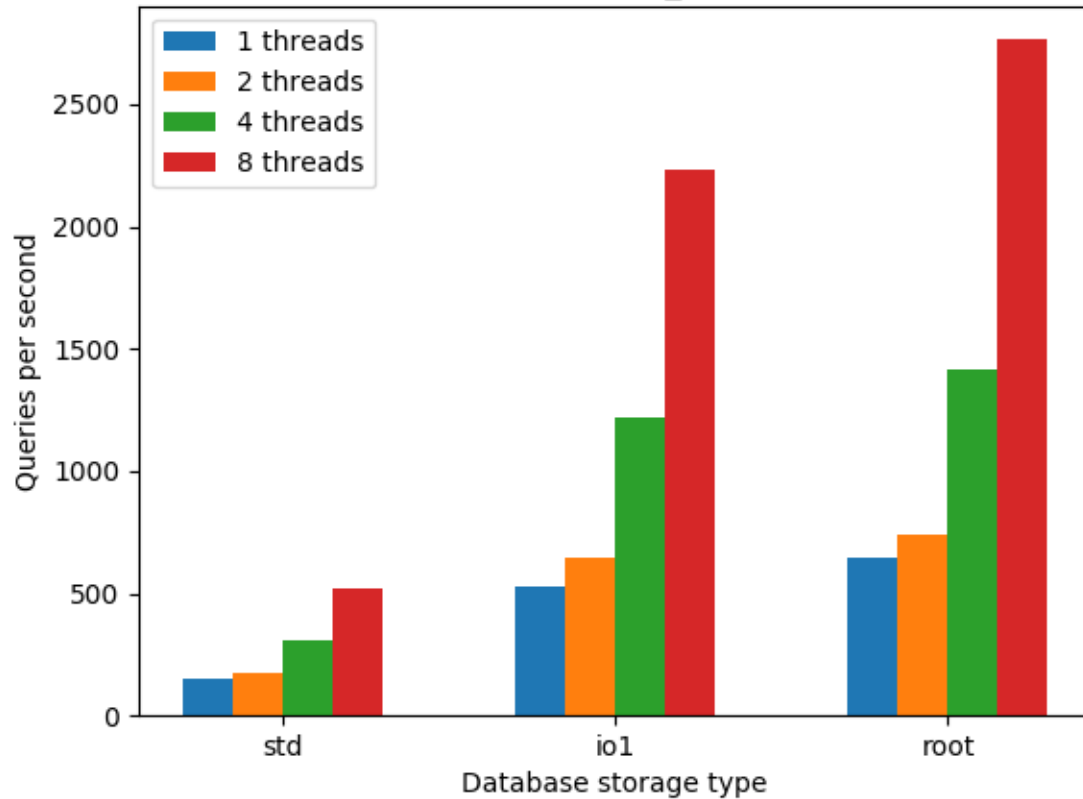
Standard volume storage: 100 IOPS
io1 volume storage: 500 IOPS
Local SSD storage: 1000+ IOPS



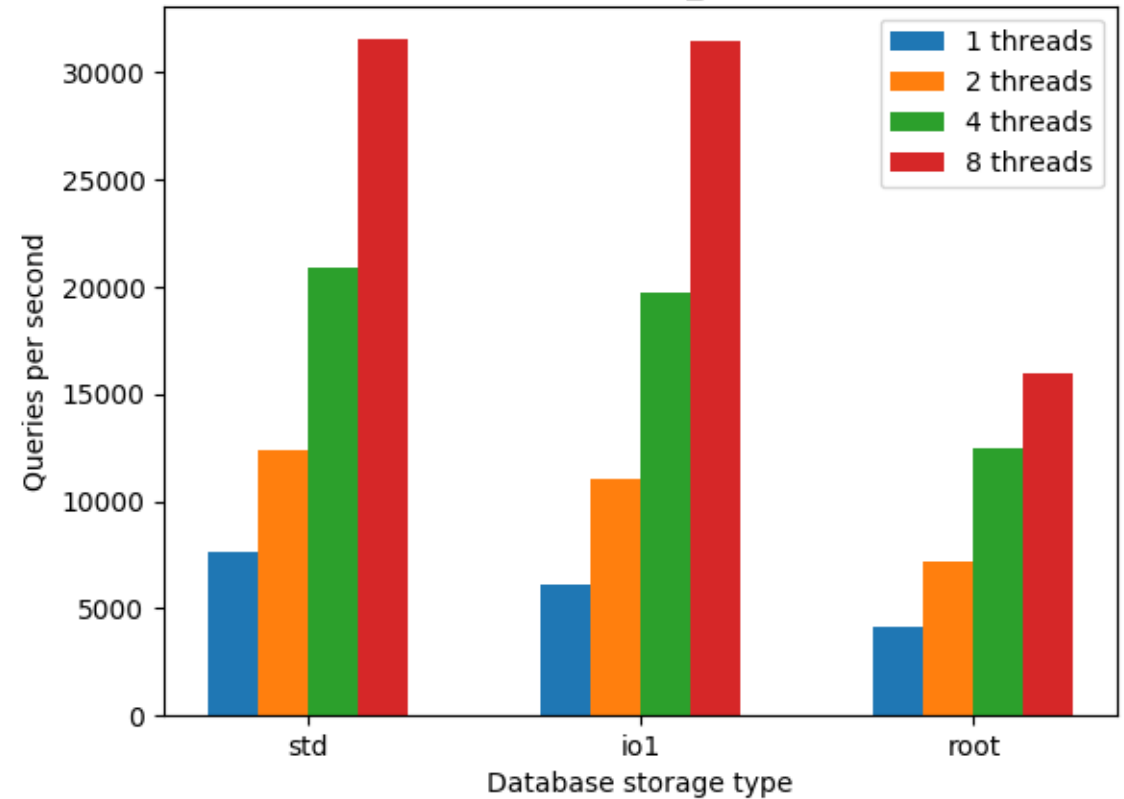
BENCHMARKING

Standard volume storage: 100 IOPS
io1 volume storage: 500 IOPS
Local SSD storage: 1000+ IOPS

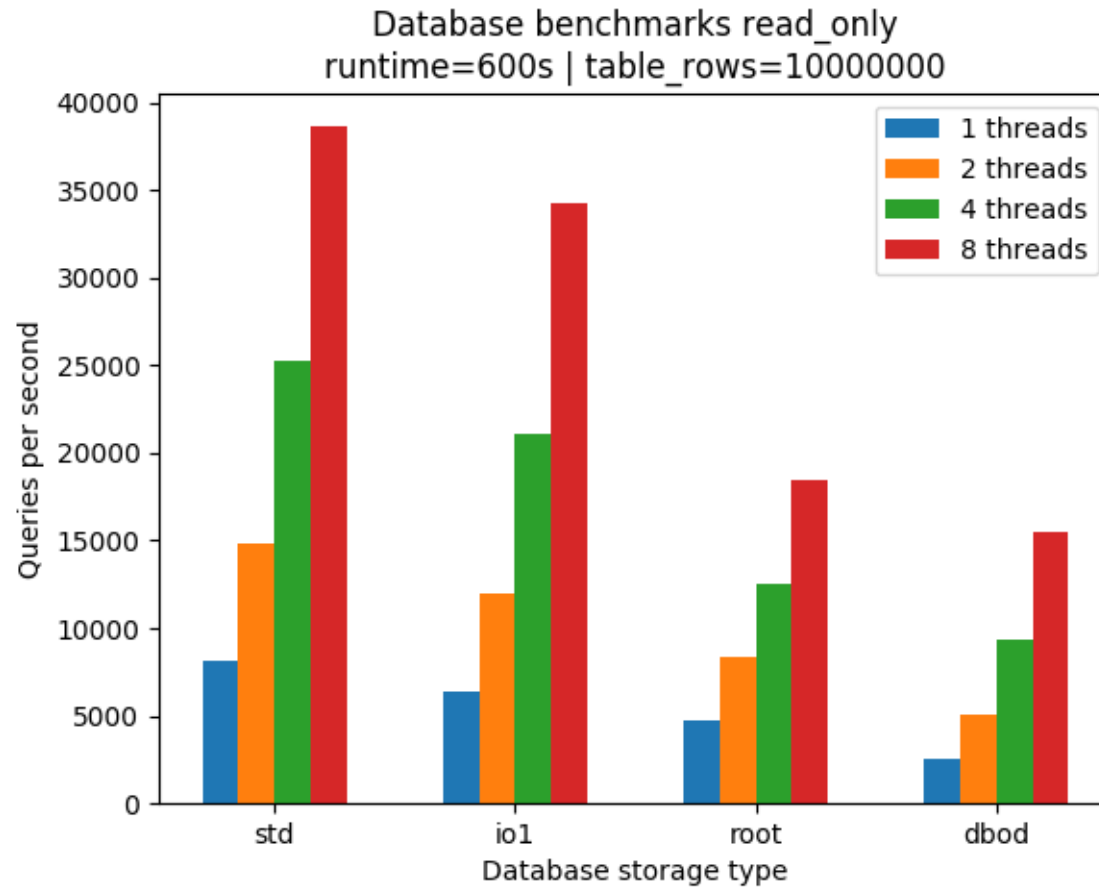
Database benchmarks write_only - runtime 1200s



Database benchmarks read_only - runtime 1200s



BENCHMARKING



trove/instance/service.py

⇒ Commit Message

```
Patch Set (-) Base 1
Patch Set (+) 1
diff --git a/trove/instance/service.py b/trove/instance/service.py
index 39bc11b..4c0b564 100644
--- a/trove/instance/service.py
+++ b/trove/instance/service.py
@@ -282,21 +282,21 @@
282 282
283 283     configuration = self._configuration_parse(context, body)
284 284     databases = populate_validated_databases(
285 285         body['instance'].get('databases', []))
286 286     database_names = [database.get('_name', '') for database in databases]
287 287     users = None
288 288     try:
289 289         users = populate_users(body['instance'].get('users', []),
290 290                               database_names)
291 291     except ValueError as ve:
292 292 -         raise exception.BadRequest(msg=ve)
292 292 +         raise exception.BadRequest(message=str(ve))
293 293
294 294     modules = body['instance'].get('modules')
295 295
296 296     # The following operations have their own API calls.
297 297     # We need to make sure the same policies are enforced when
298 298     # creating an instance.
299 299     # i.e. if attaching configuration group to an existing instance is not
300 300     # allowed, it should not be possible to create a new instance with the
301 301     # group attached either
302 302     if configuration:
```

⇒ Commit Message

FUTURE WORK

Still some work do do for backup/restore functionality.
(Requires swift for object storage)

InfluxDB



QUESTIONS?