

UVS Cosbench Tutorial

Environment:

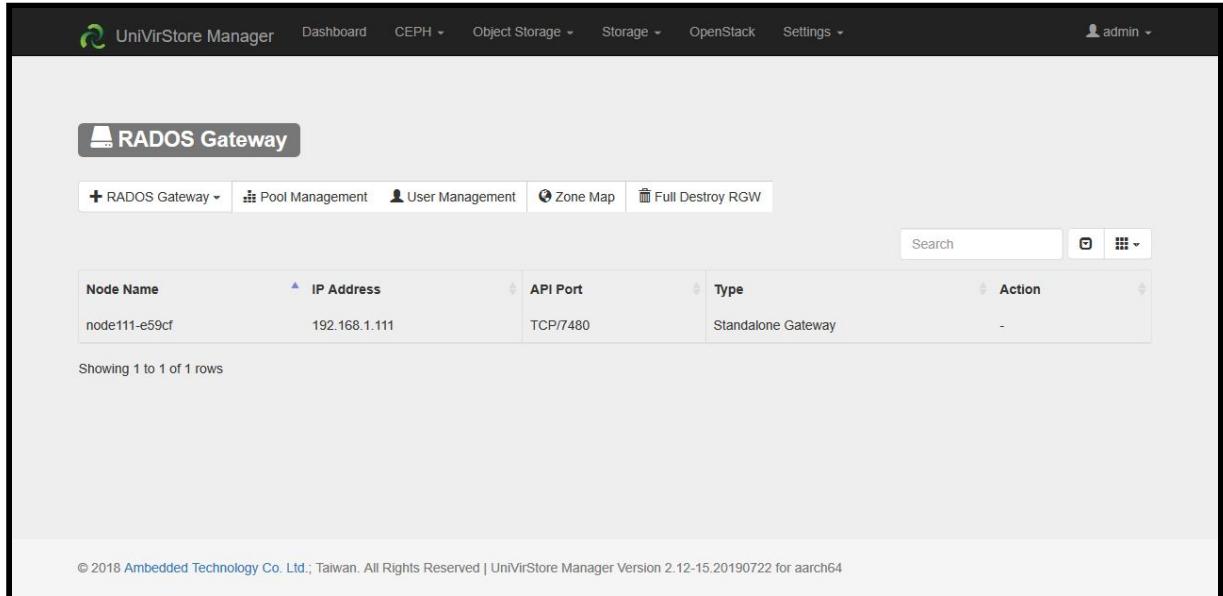
- Mars400 x1
- CentOS 7 client x1

Step1:

Deploy Ceph RADOS Gateway on Mars400

1-1:

Deploy “Standalone Gateway” or another type of Gateway.



The screenshot shows the UniVirStore Manager web interface. At the top, there is a navigation bar with links for Dashboard, CEPH, Object Storage, Storage, OpenStack, and Settings. On the far right, there is a user profile icon labeled "admin". Below the navigation bar, the main content area has a title "RADOS Gateway". Underneath the title, there is a toolbar with several buttons: "+ RADOS Gateway", "Pool Management", "User Management", "Zone Map", and "Full Destroy RGW". To the right of the toolbar is a search bar and a grid icon. The main content area displays a table with one row of data. The table columns are "Node Name", "IP Address", "API Port", "Type", and "Action". The data row shows "node111-e59cf", "192.168.1.111", "TCP/7480", "Standalone Gateway", and a minus sign in the Action column. At the bottom of the table, it says "Showing 1 to 1 of 1 rows". At the very bottom of the page, there is a footer with the text "© 2018 Embedded Technology Co. Ltd.; Taiwan. All Rights Reserved | UniVirStore Manager Version 2.12-15.20190722 for aarch64".

Node Name	IP Address	API Port	Type	Action
node111-e59cf	192.168.1.111	TCP/7480	Standalone Gateway	-

1-2:

Create S3 User and copy access & secret keys for cosbench.

The screenshot shows the UniVirStore Manager web interface under the 'S3/Swift User Management' section. A green button labeled '+ Create New User' is visible. Below it is a table with one row, showing details for a user named 'test1'. The table has columns for 'UID', 'Name', 'Keys', 'Quota', and 'Action'. The 'Keys' column displays S3 and Swift access credentials. The 'Quota' column shows 'Disabled'. The 'Action' column contains 'Edit Quota' and 'Delete' buttons.

UID	Name	Keys	Quota	Action
test1	test1	S3 Access Key : ICSFCCYSHE2G6WRU9YIBA S3 Secret Key : afyYdsYAkWxaQ11rcacePaMaQ1TAsw9p4yDNqf Swift UID : test1:swift Swift Secret Key : ogawm5mNiqa8Q3L6iCmRBHORYjS2d7Re759k5HdH	Disabled	Edit Quota Delete

Showing 1 to 1 of 1 rows

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1-3:

Test RADOS Gateway endpoint (http://RGW_IP:7480)

The screenshot shows a Mozilla Firefox browser window displaying an XML document. The address bar shows the URL '192.168.1.111:7480'. The XML content is as follows:

```

<ListAllMyBucketsResult>
  <Owner>
    <ID>anonymous</ID>
    <DisplayName/>
  </Owner>
  <Buckets/>
</ListAllMyBucketsResult>

```

Step2:

Install cosbench on CentOS 7 client.

2-1:

Download & Install cosbench

```
$ yum install java-1.7.0-openjdk nmap-ncat java
$ wget https://github.com/intel-cloud/cosbench/releases/download/v0.4.2.c4/0.4.2.c4.zip
$ unzip 0.4.2.c4.zip
```

```
$ cd 0.4.2.c4
# Edit line 46 on cosbench-start.sh and add
"-Dcom.amazonaws.services.s3.disableGetObjectMD5Validation=true" for java
#/usr/bin/nohup java -Dcom.amazonaws.services.s3.disableGetObjectMD5Validation=true
-Dcosbench.tomcat.config=$TOMCAT_CONF .....
$ vi cosbench-start.sh
$ chmod +x *.sh
$ ./start-all.sh
```

```
Launching osgi framework ...
Successfully launched osgi framework!
Booting cosbench driver ...
.
Starting cosbench-log_0.4.2 [OK]
Starting cosbench-tomcat_0.4.2 [OK]
Starting cosbench-config_0.4.2 [OK]
Starting cosbench-http_0.4.2 [OK]
Starting cosbench-cdmi-util_0.4.2 [OK]
Starting cosbench-core_0.4.2 [OK]
Starting cosbench-core-web_0.4.2 [OK]
Starting cosbench-api_0.4.2 [OK]
Starting cosbench-mock_0.4.2 [OK]
Starting cosbench-ampli_0.4.2 [OK]
Starting cosbench-swift_0.4.2 [OK]
Starting cosbench-keystone_0.4.2 [OK]
Starting cosbench-httpauth_0.4.2 [OK]
Starting cosbench-s3_0.4.2 [OK]
Starting cosbench-librados_0.4.2 [OK]
Starting cosbench-scality_0.4.2 [OK]
Starting cosbench-cdmi-swift_0.4.2 [OK]
Starting cosbench-cdmi-base_0.4.2 [OK]
Starting cosbench-driver_0.4.2 [OK]
Starting cosbench-driver-web_0.4.2 [OK]
Successfully started cosbench driver!
Listening on port 0.0.0.0/0.0.0.0:18089 ...
Persistence bundle starting...
Persistence bundle started.
-----
!!! Service will listen on web port: 18088 !!!
-----
```

```
=====
Launching osgi framework ...
Successfully launched osgi framework!
Booting cosbench controller ...
.
Starting cosbench-log_0.4.2 [OK]
Starting cosbench-tomcat_0.4.2 [OK]
Starting cosbench-config_0.4.2 [OK]
Starting cosbench-core_0.4.2 [OK]
Starting cosbench-core-web_0.4.2 [OK]
Starting cosbench-controller_0.4.2 [OK]
Starting cosbench-controller-web_0.4.2 [OK]
Successfully started cosbench controller!
Listening on port 0.0.0.0/0.0.0.0:19089 ...
Persistence bundle starting...
Persistence bundle started.
-----
!!! Service will listen on web port: 19088 !!!
-----
```

2-2:

Browse cosbench homepage (http://CentOS_CLIENT_IP:19088/controller/index.html)

The screenshot shows the COSBENCH - CONTROLLER WEB CONSOLE interface. At the top, there's a navigation bar with tabs for 'COSBENCH Controller' and 'UniVirStore Manager'. The main content area has a blue header 'COSBENCH - CONTROLLER WEB CONSOLE' with the time 'Tue Oct 22 17:52:13 CST 2019' and version '0.4.2.20160615'. Below the header, there's a 'Controller Overview' section with a table:

Driver	Name	URL	IsAlive	Link
1	driver1	http://127.0.0.1:18088/driver	green	view details

Below this are links: 'submit new workloads', 'config workloads', and 'advanced config for workloads'. There are also sections for 'Active Workloads', 'Historical Workloads', and 'Archived Workloads', each with a table header.

2-3:

Edit samplefile and run a test.

```
# Still in 0.4.2.c4 folder
$ cp conf/s3-config-sample.xml s3-rgw.xml
$ vi s3-rgw.xml
$ ./cli.sh submit s3-rgw.xml
Accepted with ID: w1
```

s3-rgw.xml

```
# Red words, You should edit it
# Green words, You might want to edit it
<?xml version="1.0" encoding="UTF-8" ?>
<workload name="s3-sample" description="sample benchmark for s3">

    <storage type="s3"
config="accesskey=ICSFCYSHE2G6WRU9YIBA;secretkey=afyYdsYAkWxacQI1LrcacePa
MaQ1TAsw9p4yDNqf;endpoint=http://192.168.1.111:7480;path_style_access=true" />

    <workflow>

        <workstage name="init">
            <work type="init" workers="1" config="cprefix=s3testqwer;containers=r(1,2)" />
        </workstage>

        <workstage name="prepare">
```

```

<work type="prepare" workers="1"
config="cprefix=s3testqwer;containers=r(1,2);objects=r(1,10);sizes=c(64)KB" />
</workstage>

<workstage name="main">
<work name="main" workers="8" runtime="30">
<operation type="read" ratio="80"
config="cprefix=s3testqwer;containers=u(1,2);objects=u(1,10)" />
<operation type="write" ratio="20"
config="cprefix=s3testqwer;containers=u(1,2);objects=u(11,20);sizes=c(64)KB" />
</work>
</workstage>

<workstage name="cleanup">
<work type="cleanup" workers="1"
config="cprefix=s3testqwer;containers=r(1,2);objects=r(1,20)" />
</workstage>

<workstage name="dispose">
<work type="dispose" workers="1" config="cprefix=s3testqwer;containers=r(1,2)" />
</workstage>

</workflow>

</workload>

```

2-4:

Test running

The screenshot shows the COSBENCH - CONTROLLER WEB CONSOLE interface. At the top, it displays the time and version: "time: Tue Oct 22 18:03:10 CST 2019" and "version: 0.4.2.20160615". Below this is the "Controller Overview" section, which includes a table of drivers and links for submitting new workloads, configuring workloads, and advanced configuration.

Driver	Name	URL	IsAlive	Link
1	driver1	http://127.0.0.1:18088/driver	●	view details

Below the overview are sections for "Active Workloads" and "Historical Workloads". The "Active Workloads" table shows one entry: "w1" with "s3-sample" as the name, submitted at "Oct 22, 2019 6:02:41 PM", in a "processing" state, and an order of 1. The "Historical Workloads" section shows a single entry: "view performance matrix".

ID	Name	Submitted-At	State	Order	Link
w1	s3-sample	Oct 22, 2019 6:02:41 PM	processing	1	view details

The "Archived Workloads" section contains a link to "load archived workloads" and a "resubmit" button.

COSBENCH - CONTROLLER WEB CONSOLE

time: Tue Oct 22 18:03:47 CST 2019
version: 0.4.2.20160615

[index](#) -> workload

Workload

Basic Info

ID: w1 Name: s3-sample Current State: finished

Submitted At: Oct 22, 2019 6:02:41 PM Started At: Oct 22, 2019 6:02:41 PM Stopped At: Oct 22, 2019 6:03:38 PM

[more info](#)

Final Result

General Report

Op-Type	Op-Count	Byte-Count	Avg-RestTime	Avg-ProcTime	Throughput	Bandwidth	Succ-Ratio
op1: init -write	0 ops	0 B	N/A	N/A	0 op/s	0 B/S	N/A
op1: prepare -write	20 ops	1.28 MB	35.4 ms	29.65 ms	27.55 op/s	1.76 MB/S	100%
op1: read	6.46 kops	413.57 MB	14.52 ms	13.7 ms	215.66 op/s	13.8 MB/S	100%
op2: write	1.56 kops	99.58 MB	93.35 ms	92.67 ms	51.93 op/s	3.32 MB/S	100%
op1: cleanup -delete	40 ops	0 B	23.55 ms	23.55 ms	42.37 op/s	0 B/S	100%
op1: dispose	-	-	-	-	-	-	-

Intel Corporation

[show performance details](#)

Stages

Current Stage	Stages completed	Stages remaining	Start Time	End Time	Time Remaining	Link
ID	Name	Works	Workers	Op-Info	State	Link
w1-s1-init	init	1 wks	1 wkr	init	completed	view details
w1-s2-prepare	prepare	1 wks	1 wkr	prepare	completed	view details
w1-s3-main	main	1 wks	8 wrks	read, write	completed	view details
w1-s4-cleanup	cleanup	1 wks	1 wkr	cleanup	completed	view details
w1-s5-dispose	dispose	1 wks	1 wkr	dispose	completed	view details

There are 5 stages in this workload.

[show error statistics details](#)

Performance Graph

Actions

[download-log](#) [download-config](#)

[go back to index](#)