$\label{lem:comparitive} Comparitive \ Performance \ Report \ for \ cbt-21stFeb-main-8vol-finegrain-cacheon-rbdoff-allappends \ vs \ cbt-21stFeb-ls19-8vol-finegrain-cacheon-rbdoff-allappends \ vs \ cbt-21stFeb-ls21-8vol-finegrain-cacheon-rbdoff-allappends \ vs \ cbt-21stFeb-ls22-8vol-finegrain-cacheon-rbdoff-allappends \ vs \ cbt-21stFeb-ls22-8vol-finegrain-cacheon-rbdoff-allappends \ vs \ cbt-20thFeb-ecoptmain-8vol-finegrain-cacheon-rbdoff-allappends3$

Comparitive Performance Report for cbt-21stFeb-main-8vol-finegrain-cacheon-rbdoff-allappends vs cbt-21stFeb-ls19-8vol-finegrain-cacheon-rbdoff-allappends vs cbt-21stFeb-ls20-8vol-finegrain-cacheon-rbdoff-allappends vs cbt-21stFeb-ls21-8vol-finegrain-cacheon-rbdoff-allappends vs cbt-21stFeb-ls22-8vol-finegrain-cacheon-rbdoff-allappends vs cbt-20thFeb-ecoptmain-8vol-finegrain-cacheon-rbdoff-allappends3

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- Response Curves
 - Sequential Write
- Configuration yaml files
 - results

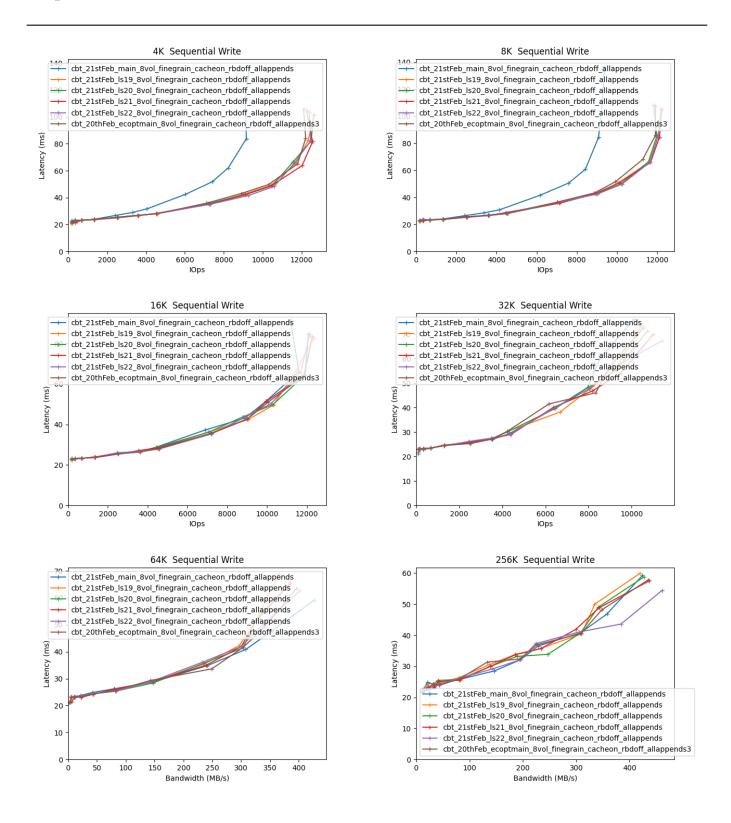
 $\label{lem:comparison} Comparison summary for cbt-21stFeb-main-8vol-finegrain-cacheon-rbdoff-allappends vs cbt-21stFeb-ls19-8vol-finegrain-cacheon-rbdoff-allappends vs cbt-21stFeb-ls20-8vol-finegrain-cacheon-rbdoff-allappends vs cbt-21stFeb-ls21-8vol-finegrain-cacheon-rbdoff-allappends vs cbt-21stFeb-ls22-8vol-finegrain-cacheon-rbdoff-allappends vs cbt-20thFeb-ecoptmain-8vol-finegrain-cacheon-rbdoff-allappends3$

Comparison summary for cbt-21stFeb-main-8vol-finegrain-cacheon-rbdoff-allappends vs cbt-21stFeb-ls19-8vol-finegrain-cacheon-rbdoff-allappends vs cbt-21stFeb-ls20-8vol-finegrain-cacheon-rbdoff-allappends vs cbt-21stFeb-ls21-8vol-finegrain-cacheon-rbdoff-allappends vs cbt-21stFeb-ls22-8vol-finegrain-cacheon-rbdoff-allappends vs cbt-20thFeb-ecoptmain-8vol-finegrain-cacheon-rbdoff-allappends3

Sequential					
Write		n Ækrtəli ı2ff sətələ#kehərləs266	odobatch 2 fillatellookerhaldsbete	clebrils 2filstdefehalstee	<u>clearth 2010 de Cohadaga cheadan r</u> 8
$\frac{1}{4K}$	9324@137.112642@101.336%	12626@101.335%	12565@81.6 35%	12466@82.1 34%	12209@84.0 31%
8K	9385@1361620187@105.130%	11984@85.4 28%	12230@104.630%	12245@104.630%	11919@107.327%
16K	11601@66 .12386 4@82.8 7%	12078@84.7 4%	12278@83.3 6%	12151@84.3 5%	12074@84.8 4%
32K	10105@75 19045 0@73.5 3%	10746@71.4 6%	10989@69.9 9%	11406@67.3~13%	$10555@72.7 ext{ } 4\%$
64K	426@59.0m $66@68.8$ $-14%$	385@65.3 -10%	385@65.4 -10%	402@62.6 $-6%$	396@63.5 -7%
256K	424@59.2m4\$9@59.9 -1%	427@58.8 1%	437@57.5 3%	461@54.5 9%	435@57.8 3%
512K	455@110.6 449 @112.0 -1%	461@109.2 1%	459@109.4 1%	457@109.9 0%	461@109.1 1%
1024K	516@97.2m4 $$8@140.5$ -7%	485@138.3 -6%	503@133.2 -3%	487@137.5 -6%	500@133.9 -3%

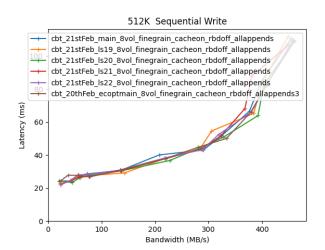
Response Curves

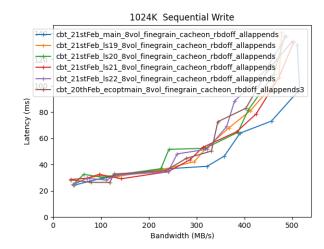
Sequential Write



cbt-21stFeb-main-8vol-finegrain-cacheon-rbdoff-allappends 4s cbt-21stFeb-ls19-8vol-finegrain-cacheon-Februaria 25p2025 vs cbt-21stFeb-ls20-8vol-finegrain-cacheon-rbdoff-allappends vs

Response Curves Sequential Write





Configuration yaml files

Only yaml files that differ by more than 20 lines from the yaml file for the baseline directory will be added here in addition to the baseline yaml

results

```
librbdfio:
  cmd_path: /usr/local/bin/fio
  fio_out_format: json
  log_avg_msec: 100
  log_bw: true
  log_iops: true
  log_lat: true
  norandommap: true
 osd_ra:
  - 4096
 poolname: rbd_replicated
 prefill:
    blocksize: 64k
    numjobs: 1
  procs_per_volume:
  - 1
  ramp: 30
  time: 60
  time_based: true
  use_existing_volumes: true
  vol_size: 1000
  volumes_per_client:
  workloads:
    64kseqwriteappend:
      jobname: write
      mode: write
      numjobs:
      - 1
      op_size: 65536
      pre_workload_script: /cbt.lee/tools/setup_cluster/mkdelvols.cbt
      total_iodepth:
      - 1
      - 2
      - 4
      - 8
      - 16
      - 32
      - 64
      - 128
      - 192
      - 256
      - 384
    seq16kwriteappend:
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      pre_workload_script: /cbt.lee/tools/setup_cluster/mkdelvols.cbt
      total_iodepth:
      - 4
      - 8
      - 16
      - 32
      - 64
      - 96
      - 128
      - 256
      - 384
      - 512
```

```
- 768
  - 1024
seq1Mwriteappend:
  jobname: seqwrite
 mode: write
 numjobs:
  - 1
  op_size: 1048576
  pre_workload_script: /cbt.lee/tools/setup_cluster/mkdelvols.cbt
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 8
  - 12
  - 16
  - 24
  - 32
  - 48
  - 64
{\tt seq256kwriteappend:}
  jobname: seqwrite
 mode: write
 numjobs:
  - 1
  op_size: 262144
  pre_workload_script: /cbt.lee/tools/setup_cluster/mkdelvols.cbt
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 8
  - 16
  - 24
  - 32
  - 48
 - 64
  - 96
seq32kwriteappend:
 jobname: seqwrite
 mode: write
 numjobs:
  - 1
  op_size: 32768
  pre_workload_script: /cbt.lee/tools/setup_cluster/mkdelvols.cbt
  total_iodepth:
  - 2
  - 4
  - 8
  - 16
  - 32
 - 64
  - 96
  - 128
  - 256
  - 384
  - 512
  - 768
seq4kwriteappend:
  jobname: seqwrite
  mode: write
```

```
numjobs:
        op_size: 4096
        pre_workload_script: /cbt.lee/tools/setup_cluster/mkdelvols.cbt
        total_iodepth:
        - 8
        - 16
        - 32
        - 64
        - 96
        - 128
        - 256
        - 384
        - 512
        - 768
        - 1024
        - 1280
      seq512kwriteappend:
        jobname: seqwrite
        mode: write
        numjobs:
        - 1
        op_size: 524288
        pre_workload_script: /cbt.lee/tools/setup_cluster/mkdelvols.cbt
        total_iodepth:
        - 1
        - 2
        - 3
        - 4
        - 8
        - 16
        - 24
        - 32
        - 48
        - 64
        - 96
      seq8kwriteappend:
        jobname: seqwrite
        mode: write
        numjobs:
        - 1
        op_size: 8192
        pre_workload_script: /cbt.lee/tools/setup_cluster/mkdelvols.cbt
        total_iodepth:
        - 4
        - 8
        - 16
        - 32
        - 64
        - 96
        - 128
        - 256
        - 384
        - 512
        - 768
        - 1024
        - 1280
cluster:
  archive_dir: /tmp/cbt
  ceph-mgr_cmd: /usr/bin/ceph-mgr
  ceph-mon_cmd: /usr/bin/ceph-mon
  ceph-osd_cmd: /usr/bin/ceph-osd
```

```
ceph-run_cmd: /usr/bin/ceph-run
  ceph cmd: /usr/bin/ceph
  clients:
  - --- server1 ---
  clusterid: ceph
  conf_file: /cbt/ceph.conf.4x1x1.fs
  fs: xfs
  head: --- server1 ---
  iterations: 1
  mgrs:
    --- server1 ---:
     a: null
  mkfs_opts: -f -i size=2048
  mons:
    --- server1 ---:
     a: --- IP Address --:6789
  mount_opts: -o inode64, noatime, logbsize=256k
  osds:
  - --- server1 ---
  osds_per_node: 6
  pdsh_ssh_args: -a -x -l%u %h
  rados_cmd: /usr/bin/rados
  rbd_cmd: /usr/bin/rbd
  tmp_dir: /tmp/cbt
  use_existing: true
  user: root
monitoring_profiles:
  collectl:
    args: -c 18 -sCD -i 10 -P -oz -F0 --rawtoo --sep ";" -f {collectl_dir}
  librbdfio:
    cmd_path: /usr/local/bin/fio
    fio_out_format: json
    log_avg_msec: 100
    log_bw: true
    log_iops: true
    log_lat: true
   norandommap: true
    osd_ra:
    - 4096
    poolname: rbd_replicated
    prefill:
     blocksize: 64k
      numjobs: 1
    procs_per_volume:
    - 1
    ramp: 30
    time: 60
    time_based: true
    use_existing_volumes: true
    vol_size: 1000
    volumes_per_client:
    - 8
    workloads:
      64kseqwriteappend:
        jobname: write
        mode: write
        numjobs:
        - 1
        op_size: 65536
        pre_workload_script: /cbt.lee/tools/setup_cluster/mkdelvols.cbt
        total_iodepth:
        - 1
```

```
- 2
  - 4
  - 8
  - 16
  - 32
  - 64
  - 128
  - 192
  - 256
  - 384
seq16kwriteappend:
  jobname: seqwrite
 mode: write
 numjobs:
  - 1
  op_size: 16384
  pre_workload_script: /cbt.lee/tools/setup_cluster/mkdelvols.cbt
  total_iodepth:
  - 4
  - 8
  - 16
  - 32
  - 64
  - 96
  - 128
  - 256
  - 384
  - 512
  - 768
  - 1024
{\tt seq1Mwriteappend:}
  jobname: seqwrite
 mode: write
 numjobs:
  - 1
  op_size: 1048576
 pre_workload_script: /cbt.lee/tools/setup_cluster/mkdelvols.cbt
 total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 8
  - 12
  - 16
  - 24
  - 32
  - 48
  - 64
seq256kwriteappend:
  jobname: seqwrite
 mode: write
 numjobs:
  - 1
  op_size: 262144
  pre_workload_script: /cbt.lee/tools/setup_cluster/mkdelvols.cbt
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 8
  - 16
```

```
- 24
  - 32
  - 48
  - 64
  - 96
seq32kwriteappend:
  jobname: seqwrite
  mode: write
  numjobs:
  - 1
  op_size: 32768
 pre_workload_script: /cbt.lee/tools/setup_cluster/mkdelvols.cbt
  - 2
  - 4
  - 8
  - 16
  - 32
  - 64
  - 96
  - 128
  - 256
  - 384
  - 512
  - 768
{\tt seq4kwriteappend:}
  jobname: seqwrite
  mode: write
 numjobs:
  - 1
  op_size: 4096
  pre_workload_script: /cbt.lee/tools/setup_cluster/mkdelvols.cbt
  total_iodepth:
  - 4
  - 8
  - 16
  - 32
  - 64
  - 96
  - 128
  - 256
  - 384
  - 512
  - 768
  - 1024
  - 1280
seq512kwriteappend:
  jobname: seqwrite
 mode: write
 numjobs:
  - 1
  op_size: 524288
 pre_workload_script: /cbt.lee/tools/setup_cluster/mkdelvols.cbt
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 8
  - 16
  - 24
  - 32
  - 48
```

```
- 64
        - 96
      seq8kwriteappend:
        jobname: seqwrite
        mode: write
        numjobs:
        - 1
        op_size: 8192
        pre_workload_script: /cbt.lee/tools/setup_cluster/mkdelvols.cbt
        total_iodepth:
        - 4
        - 8
        - 16
        - 32
        - 64
        - 96
        - 128
        - 256
        - 384
        - 512
        - 768
        - 1024
        - 1280
cluster:
  archive_dir: /tmp/cbt
  ceph-mgr_cmd: /usr/bin/ceph-mgr
  ceph-mon_cmd: /usr/bin/ceph-mon
  ceph-osd_cmd: /usr/bin/ceph-osd
  ceph-run_cmd: /usr/bin/ceph-run
  ceph_cmd: /usr/bin/ceph
  clients:
  - --- server1 ---
  clusterid: ceph
  conf_file: /cbt/ceph.conf.4x1x1.fs
  fs: xfs
  head: --- server1 ---
  iterations: 1
  mgrs:
    --- server1 ---:
     a: null
  mkfs_opts: -f -i size=2048
  mons:
   --- server1 ---:
     a: --- IP Address --:6789
  mount_opts: -o inode64,noatime,logbsize=256k
  osds:
  - --- server1 ---
  osds_per_node: 6
  pdsh_ssh_args: -a -x -1%u %h
  rados_cmd: /usr/bin/rados
  rbd_cmd: /usr/bin/rbd
  tmp_dir: /tmp/cbt
  use_existing: true
  user: root
monitoring_profiles:
  collectl:
    args: -c 18 -sCD -i 10 -P -oz -F0 --rawtoo --sep ";" -f {collectl_dir}
```