mysql8 xtrabackup (Docker)

```
Container
                                    xtrabackup
                  Mysql8
Full Backup / Restore
     , Docker
                                 DB
                                         (Full Backup)
                   DB
       Host machine
                                , OOM
                                                     가
                                   "xtrabackup"
mysqldump
 xtrabackup?
 - Mysql / Mariadb
 - xtrabackup
                 mysqldump xtrabackup
 Backup Server
xtrabackup
 xtrabackup Host Mysql Container
```

docker / docker-compose / mysql container

OS / Host OS

가

```
xtrabackup mysql 7+ 7+ logrotate
```

docker-compose up -d

mysql8 container (-d:

docker ps

Container ID

docker exec -it [Container ID] /bin/bash

Container

```
root@localhost:/home/data# docker-compose up -d
[+] Running 2/2

## Network data_default Created
## Container mysql8 Started
root@localhost:/home/data# docker ps
CONTAINER ID IMAGE
80bf3def47bd
root@localhost:/home/data# docker exec -it 80b /bin/bash
root@80bf3def47bd:/#
```

^{*} mysql docker-compose.yml

apt update -y && apt upgrade -y

•

```
root@80bf3def47bd:/# apt update -y && apt upgrade -y
Get:1 http://security.debian.org/debian-security buster/updates InRelease [65.4 kB]
Get:2 http://deb.debian.org/debian buster InRelease [122 kB]
Get:3 http://deb.debian.org/debian buster-updates InRelease [51.9 kB]
Get:4 http://repo.mysql.com/apt/debian buster InRelease [22.1 kB]
Get:5 http://security.debian.org/debian-security buster/updates/main amd64 Packages [329 kB]
Get:6 http://deb.debian.org/debian buster/main amd64 Packages [7911 kB]
Get:7 http://deb.debian.org/debian buster-updates/main amd64 Packages [8788 B]
Get:8 http://repo.mysql.com/apt/debian buster/mysql-8.0 amd64 Packages [8447 B]
Fetched 8518 kB in 2s (4655 kB/s)
```

apt install -y wget lsb-release

.

• wget: xtrabackup (.deb) 가

• lsb-release : OS

```
root@80bf3def47bd:/# apt install -y wget lsb-release
Reading package lists... Done
Building dependency tree
Reading state information... Done
lsb-release is already the newest version (10.2019051400).
The following additional packages will be installed:
    ca-certificates libpcre2-8-0 libps15 publicsuffix
The following NEW packages will be installed:
```

lsb release -a

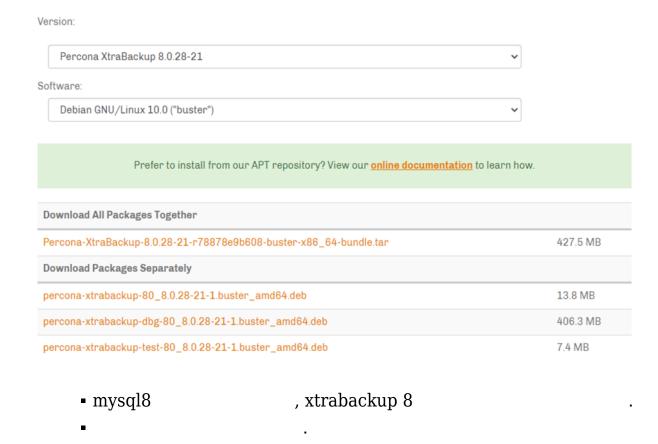
OS

```
root@80bf3def47bd:/# lsb_release -a
No LSB modules are available.
Distributor ID: Debian
Description: Debian GNU/Linux 10 (buster)
Release: 10
Codename: buster
```

xtrabackup

URL: https://www.percona.com/downloads/Percona-XtraBackup-LATEST/

Download Percona XtraBackup 8.0



wget

 $\frac{https://downloads.percona.com/downloads/Percona-XtraBackup-LATEST/Percona-XtraBackup-8.0.28-21/binary/debian/buster/x86_64/percona-xtrabackup-80_8.0.28-21-1.buster_amd64.deb}$

▶ 가

```
-considering functions local/sect were intent/communicate percons.com/dominicate percons.com/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dominicate/dom
```

- # dpkg -i percona-xtrabackup-80_8.0.28-21-1.buster_amd64.deb
- # apt install -f -y //
- # dpkg -i percona-xtrabackup-80 8.0.28-21-1.buster amd64.deb

```
root@80bf3def47bd:/usr/local/src# dpkg -i percona-xtrabackup-80_8.0.28-21-1.buster_amd64.deb
(Reading database ... 10725 files and directories currently installed.)
Preparing to unpack percona-xtrabackup-80_8.0.28-21-1.buster_amd64.deb ...
Unpacking percona-xtrabackup-80 (8.0.28-21-1.buster) over (8.0.28-21-1.buster) ...
Setting up percona-xtrabackup-80 (8.0.28-21-1.buster) ...
Processing triggers for libc-bin (2.28-10+deb10u1) ...
```

xtrabackup

가 Full backup

xtrabackup -backup -target-dir=/home/bak/xtra/

가

```
2022-06-24T01:37:38.775373-00:00 0 [Note] [MY-011825] [Xtrabackup] recognized server arguments: --datadi
db_flush_method=0_DIRECT --innodb_log_files_in_group=2 --innodb_flush_log_at_trx_commit=2 --open_files_l
2022-06-24T01:37:38.775665-00:00 0 [Note] [MY-011825] [Xtrabackup] recognized client arguments: --backup
xtrabackup version 8.0.28-21 based on MySQL server 8.0.28 Linux (x86 64) (revision id: 78878e9b608)
220624 01:37:38 version_check Connecting to MySQL server with DSN 'dbi:mysql:;mysql_read_default_group= 220624 01:37:38 version_check Connected to MySQL server 220624 01:37:38 version_check Executing a version check against the server...
220624 01:37:38 version_check Done.
2022-06-24T01:37:38.884687-00:00 0 [Note] [MY-011825] [Xtrabackup] Connecting to MySQL server host: loca
2022-06-24T01:37:38.893846-00:00 0 [Note] [MY-011825] [Xtrabackup] Using server version 8.0.28
2022-06-24T01:37:38.916458-00:00 0 [Note] [MY-011825] [Xtrabackup] Executing LOCK INSTANCE FOR BACKUP .
2022-06-24T01:37:38.917416-00:00 0 [Note] [MY-011825] [Xtrabackup] uses posix_fadvise(). 2022-06-24T01:37:38.917479-00:00 0 [Note] [MY-011825] [Xtrabackup] cd to /var/lib/mysql
2022-06-24T01:37:38.917527-00:00 0 [Note]
                                                     [MY-011825] [Xtrabackup] open files limit requested 65535, set
2022-06-24T01:37:38.917608-00:00 0 [Note]
                                                     [MY-011825] [Xtrabackup] using the following InnoDB configurat
2022-06-24T01:37:38.917631-00:00 0 [Note]
                                                     [MY-011825] [Xtrabackup] innodb_data_home_dir =
2022-06-24T01:37:38.917647-00:00 0 [Note] [MY-011825] [Xtrabackup] innodb data file path = ibdatal:12M:a
2022-06-24T01:37:38.917711-00:00 0 [Note] [MY-011825] [Xtrabackup] innodb_log_group_home_dir = ./
2022-06-24T01:37:38.917744-00:00 0 [Note] [MY-011825] [Xtrabackup] innodb_log_files_in_group = 2
2022-06-24T01:37:38.917780-00:00 0 [Note] [MY-011825] [Xtrabackup] innodb_log_file_size = 2147483648
2022-06-24T01:37:38.917831-00:00 0 [Note]
                                                     [MY-011825] [Xtrabackup] using O_DIRECT
                                                     [MY-013251] [InnoDB] Number of pools: 1
2022-06-24T01:37:38.918580-00:00 0
                                            [Note]
2022-06-24T01:37:38.920252-00:00 0
                                                     [MY-011825] [Xtrabackup] inititialize_service_handles suceeded
                                            [Note]
2022-06-24T01:37:41.290606-00:00 0 [Note]
                                                     [MY-011825] [Xtrabackup] Connecting to MySQL server host: local
 2022-06-24T01:37:41.296742-00:00
                                                     [MY-011825] [Xtrabackup] Redo Log Archiving is not set up.
                                            [Note]
 2022-06-24T01:37:41.392487-00:00 1 [Note]
                                                     [MY-011825] [Xtrabackup] >> log scanned up to (529087427754)
  022-06-24T01:37:42.392692-00:00 1
                                                     [MY-011825] [Xtrabackup] >> log scanned up to (529087427754)
                                            [Note]
```

2022-06-24T02:17:17.624404-00:00 0 [Note] [MY-011825] [Xtrabackup] Transaction log of lsn (529087427754) to (529087427764) was copied 2022-06-24T02:17:17.828066-00:00 0 [Note] [MY-011825] [Xtrabackup] completed OK!

completed OK!

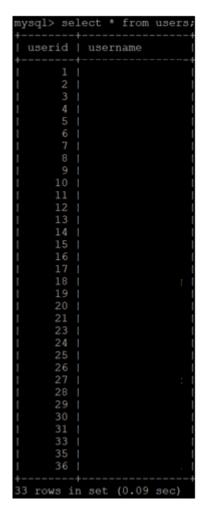
xtrabackup

Host Machine

```
# exit // .
# docker-compose down // docker compose
```

```
# du -sh /home/data/var/lib/mysql
                                            //
        /home/data/var/lib/mysql
183G
# rm -rf /home/data/var/lib/mysql/
  root@localhost:/home/data/var/lib# rm -rf /home/data/var/lib/mysql/
 root@localhost:/home/data/var/lib# du -sh /home/data/var/lib/mysql du: cannot access '/home/data/var/lib/mysql': No such file or directory root@localhost:/home/data/var/lib# mkdir /home/data/var/lib/mysql
# xtrabackup -prepare -target-dir=/home/data/bak/xtra
                                   (-prepare
                      [InnoDB] Log background threads are being closed...
                     [InnoDB] Shutdown completed; log sequence number 529087428118 [Xtrabackup] completed OK!
[Xtrabackup] completed OK!
      xtrabackup
                            -copy-back
                                                 -target-dir=/home/data/bak/xtra/
-datadir=/home/data/var/lib/mysql/
       -copy-back
                                                                               , -move-back
                                                                          .(-move-back
                                          .)
[Xtrabackup] completed OK! //
# docker-compose up -d
                                 //
# docker exec -it [Container ID] /bin/bash
                                                       //
# du -sh /var/lib/mysql
                                  //
        /var/lib/mysql
183G
                                //
  root@c8f98b39184d:/# du -sh /var/lib/mysql
  183G /var/lib/mysql
```

```
# mysql -u root -p  // mysql
# show databases;  // test db
# use zabbix;
# select * from users;  //
```



가

[Container Runtime] CRI-O 가

```
CRI-O
             가
CRI-O?
        OCI
# CRI-0
                                     (CRI) .
가
                           Docker
                                      Kubernetes 1.24
Docker CRI(
                                      shim
 (Docker Engine
                    ) CRI-0
                               가
       ( VM )
Controller Server : 1EA
Worker Server : 1EA
05
Ubuntu 20.04 Server Minimal
https://github.com/cri-o/cri-o/blob/main/install.md#supported-
versions
                : https://tech.hostway.co.kr/2022/02/06/418/
Traffic Setup
# .conf
# Controller / Worker
```

```
cat <<EOF | sudo tee /etc/modules-load.d/crio.conf</pre>
overlay
br netfilter
E0F
sudo modprobe overlay
sudo modprobe br_netfilter
#
         sysctl
# Controller / Worker
cat <<EOF | sudo tee /etc/sysctl.d/99-kubernetes-cri.conf
net.bridge.bridge-nf-call-iptables
                                    = 1
net.ipv4.ip forward
net.bridge.bridge-nf-call-ip6tables = 1
E0F
sudo sysctl --system
cgroup driver
# CRI-0
                  systemd cgroup
cgroupfs cgroup
                                  , /etc/crio/crio.conf
     /etc/crio/crio.conf.d/02-cgroup-manager.conf
 (drop-in)
[crio.runtime]
conmon cgroup = "pod"
cgroup manager = "cgroupfs"
CRI-O
# Controller / Worker
sudo -i
export OS=xUbuntu 20.04 # OS
export VERSION=1.19 # cri-o
```

```
echo
                                                         "deb
https://download.opensuse.org/repositories/devel:/kubic:/libco
ntainers:/stable/$0S/
/etc/apt/sources.list.d/devel:kubic:libcontainers:stable.list
echo
http://download.opensuse.org/repositories/devel:/kubic:/libcon
tainers:/stable:/cri-o:/$VERSION/$0S/
/etc/apt/sources.list.d/devel:kubic:libcontainers:stable:cri-
o:$VERSION.list
curl
                                                           - L
https://download.opensuse.org/repositories/devel:kubic:libcont
ainers:stable:cri-o:$VERSION/$OS/Release.key | apt-key add -
curl
https://download.opensuse.org/repositories/devel:/kubic:/libco
ntainers:/stable/$0S/Release.key | apt-key add -
sudo apt-get update
sudo apt-get install cri-o cri-o-runc
sudo systemctl daemon-reload
sudo systemctl enable crio --now
sudo systemctl status crio
Controller Node Initialize
# docker
                                    1
                                                         CRI-
0
# Controller
kubeadm init --cri-socket=/var/run/crio/crio.sock --ignore-
preflight-errors=all --pod-network-cidr=192.168.0.0/16
apiserver-advertise-address=203.248.23.192
# Worker
                    203.248.23.192:6443
kubeadm
              join
                                                     --token
```

9oy7rn.qtw04nfd8ga417p4 --discovery-token-ca-cert-hash sha256:26218e0c80320b7c23735916c130fc48f644b26314212d917969553

.