
POSTGRESQL STATIC ANALYSER REPORT

PostgreSQL Version = 9.1.3
Postgresql.conf file path = /etc/postgresql/9.1/main/postgresql.conf
Current Time = 16:03:23.646557
Current Date = 2014-03-24
TestVersion = alpha v1.0

OS Configurations

operating system name : Linux
kernel release : 3.8.0-29-generic
os instruction length : x86_64
Processor type : x86_64

Memory Info All values in KB

Free RAM : 700240
Total OS Cached : 1812792
Cached Mem : 304880
Total RAM+SWAP : 2172748
Free SWAP : 1472508
Total SWAP : 1472508
Total RAM : 1436572
Buffers : 35404

kernel resources

SEMMNS : 32000
SHMSEG : 4096
SHMMIN : 1
SEMVMX : 32767
SHMMAX : 8388608
SEMMNI : 128
SHMALL : 8388608

CPU info

number of cpu : 1
cpu speed : 2284.791
cpu avg : 2284.791

RAID info

SW RAID numbers of disks : 0
RAID levels supported by kernel : ['linear', 'multipath', 'raid0', 'raid1', 'raid6', 'raid5', 'raid4', 'raid10']

Disks and partitions

```
-----  
/dev/sda5      : 1472512 : Linux      : NONE  
/dev/sda1      : 13828095 : Linux      : Installation Part  
/dev/sda2      : 1472513 : Extended   : NONE  
/dev/sda       : 8589MB  : Disk       : NONE  
-----
```

File System information

```
-----  
BE_IMP          : vboxsf  
/dev/sr0        : iso9660  
/dev/sda1       : ext4  
udev            : devtmpfs  
-----
```

Disk Read speed

```
-----  
/dev/sda        : cached reads      disk reads  
                : ['5557.06 MB/sec'] ['61.48 MB/sec']  
-----
```

Scheduler information

```
-----  
/dev/sda        : noop [deadline] cfq  
-----
```

#####

PostgreSQL Parameters

Memory units are in KB

```
shb      : shared_buffer  
wm       : work_memory  
temp     : temp_file_limit  
fsync    : fsync  
sy_c     : synchronous_commit  
wal_b    : wal_buffers  
full_pgw : full_page_writes  
chk      : checkpoint_segments  
chkTime  : checkpoint_timeout  
chkComplete : checkpoint_completion_target
```

#####

```
-----  
#shared_memory  
-----
```

>>shared_buffer

```
shb:Current_Value      = 24 MB  
shb:Recommended_Value  = 561.1609375 MB  
shb:Upper_limit        = 8GB  
shb:Lower_Limit        = 128 KB  
#shb:Upper limit 8GB  
#shb:No need to change SHMMAX value
```

>>Work_memory

```
wm:Default_Value           = 1MB
wm:Recommended_value       = 5431 KB
wm:Lower_Limit             = 1MB
```

>>temp_file_limit

temp:Only Supported by PostgreSQL > 9.2

##WRITE AHEAD LOG

>>fsync

```
fync:Current_Value         = ON
fync:Recommended_Value     = ON
```

>>synchronous_commit

```
sy_c:Current_Value         = ON
sy_c:Recommended_Value     = ON
#sy_c:Value depends directly on 'fsync'
```

>>wal_buffers

```
wal_b:Current_value        = -1
wal_b:Recommended_value    = 16 MB
wal_b:Minimum_value        = 32kB
#wal_b:For heavy load value should be in between 1MB - 16 MB
```

>>full_page_writes

```
full_pgw:Current_value     = ON
full_pgw:Recommended_value = ON
#full_pgw:Recovers from partial page writes and Improve IO performance
```

##CHECKPOINTS

>>checkpoint_segments

```
chk:default_Value          = 3
chk:Recommended_value       = 35
chk:Memory Req for Checkpoints * WAL_BUFFERS == 574628.8
#chk:[ For bulk load :Set 128 (2GB) to 256 (4GB)
For OLAP load :Set 10 (160MB) to 64 (1GB)
]
```

>>checkpoint_timeout

```
chkTime:Current_value      = 5min
chkTime:Recommended_Value  = 5 min to 10min
#chkTime: [ Checkpoint_completion_target should be in range 0.6 to 0.9
Increase in value in check_point_completion_target will reduce I/O load ]
```

>>checkpoint_completion_target

chk_comp:Current_Value = 0.5
chk_comp:Recommended_Value = 0.9

DISK RECOMMENDATION

OS installation disk partition = /dev/sda
Remaining disks = []
PGXLOG space = 1 MB
OS + WAL + TEMP + DB ON DISK = /dev/sda

RAID RECOMMENDATIONS

| Function | Cache Flushes | Access Patterns | RAID LEVELS |
|------------------|---------------|----------------------------|-------------|
| Operating System | Rare | mix of seq and random | 1 |
| Database | Regularly | mix of seq and random | 10 |
| WAL | Constant | Sequential | 1 |
| Temp Files | Never | More random as clients inc | None |

SYSTEM TUNING RECOMMENDATIONS

>>READ AHEAD VALUE

Current Value = 256
Recommended Value = 4096
Comments =
For postgres performance improvement set value to 4096 ,for better seeks
set it using "\$sudo blockdev --getra /dev/sda"

>>File_access_time

Current_Values For Disks
/dev/sdal = 1
Comments = []

>>Overcommit Behavior

Current Value = 0
Recommended Value = 0
Comments = ['\$sysctl vm.overcommit_memory=2']

>>swappiness

Current_Value = 60
Recommended_Value = 0
Comments = ['\$sysctl vm.swappiness = 0']

>>Write_Cache_Sizing

recomm_dirty_ratio = 10

| | | |
|-------------------------------------|---|--|
| current_dirty_ratio | = | 60 |
| recomm_dirty_background_ratio | = | 5 |
| current_dirty_background_ratio | = | 40 |
| Comments | = | ['\$sysctl vm.dirty_background_ratio = |
| 5', '\$sysctl vm.dirty_ratio = 10'] | | |