**PMM Server , Client Setup [ Complete Document ]**

In this Example , I have taken 2 MariaDB servers and 1 PMM Server.

Deployed 3 RHEL 8 Versions for PMM setup ... [ EC2 ]

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| MariaDB server 1 🡺 vasu-maria1-pmm-poc 🡺 172.31.22.44 [Private IP Address]  MariaDB server 2 🡺 vasu-maria2-pmm-poc 🡺 172.31.16.154[Private IP Address ]  PMM server 🡺 vasu-pmm-poc 🡺 172.31.17.0 [ Private IP Address ] |

Security Group = Default

VPC = Default

Reference Link = [https://www.percona.com/software/pmm/quickstart#](https://www.percona.com/software/pmm/quickstart)

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Step - 1 :- Install MariaDB on Both servers

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DB Version = 10.3.12

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| [root@ip-172-31-22-44 ~]# groupadd mysql  [root@ip-172-31-22-44 ~]# useradd mysql -g mysql  [root@ip-172-31-22-44 ~]# mkdir /home/maria/  [root@ip-172-31-22-44 ~]# mkdir /home/maria/data  [root@ip-172-31-22-44 ~]# mkdir /home/maria/log  [root@ip-172-31-22-44 ~]# chown -R mysql:mysql /home/maria/data  [root@ip-172-31-22-44 ~]# chown -R mysql:mysql /home/maria/log  [root@ip-172-31-22-44 ~]# cd /usr/local/  [root@ip-172-31-22-44 local]# wget https://archive.mariadb.org//mariadb-10.3.12/bintar-linux-x86\_64/mariadb-10.3.12-linux-x86\_64.tar.gz  [root@ip-172-31-22-44 local]# tar zxvf mariadb-10.3.12-linux-x86\_64.tar.gz  [root@ip-172-31-22-44 local]# ln -s mariadb-10.3.12-linux-x86\_64 mysql  [root@ip-172-31-22-44 local]# cd mysql/  [root@ip-172-31-22-44 mysql]# pwd  /usr/local/mysql  [root@ip-172-31-22-44 mysql]# yum install libaio  [root@ip-172-31-22-44 mysql]# ./scripts/mysql\_install\_db --user=mysql --datadir=/home/maria/data  [root@ip-172-31-22-44 ~]# vi .bashrc  [root@ip-172-31-22-44 ~]# source .bashrc  [root@ip-172-31-22-44 ~]# cat .bashrc  # .bashrc  # User specific aliases and functions  alias rm='rm -i'  alias cp='cp -i'  alias mv='mv -i'  # Source global definitions  if [ -f /etc/bashrc ]; then  . /etc/bashrc  fi  PATH=$PATH:/usr/local/mysql/bin/  [root@ip-172-31-22-44 etc]# vi my.cnf  [root@ip-172-31-22-44 etc]# cat my.cnf  [client]  port = 3306  socket = /home/maria/data/mysql.sock  [mysqld]  server\_id = 1  datadir=/home/maria/data  socket=/home/maria/data/mysql.sock  user=mysql  bind-address = 0.0.0.0  innodb\_file\_per\_table=1  default\_storage\_engine=innodb  # enforce\_innodb\_engine=Innodb ##remove this parameter to avoid the error "ERROR 1286 (42000): Unknown storage engine 'partition'" when creating index  max\_connections = 200  innodb\_log\_file\_size=512M  innodb\_buffer\_pool\_size = 256M  sync\_binlog = 1  query\_cache\_type = 0  query\_cache\_size = 0  lower\_case\_table\_names = 1  character\_set\_server = utf8mb4  collation\_server = utf8mb4\_unicode\_520\_ci  # Disabling symbolic-links is recommended to prevent assorted security risks  symbolic-links=0  [mysqld\_safe]  log-error=/home/maria/data/mysqld.log  pid-file=/home/maria/data/mysqld.pid  [root@ip-172-31-22-44 ~]# cd /usr/local/mysql/  [root@ip-172-31-22-44 mysql]# pwd  /usr/local/mysql  [root@ip-172-31-22-44 mysql]# sudo cp support-files/mysql.server /etc/init.d/mysql  [root@ip-172-31-22-44 mysql]# sudo chmod +x /etc/init.d/mysql  [root@ip-172-31-22-44 mysql]# sudo chkconfig --add mysql  [root@ip-172-31-22-44 mysql]# sudo chkconfig --list  [root@ip-172-31-22-44 mysql]# sudo chkconfig --level 345 mysql on  [root@ip-172-31-22-44 mysql]# sudo chkconfig --level 2 mysql off  [root@ip-172-31-22-44 mysql]# service mysql start  Starting mysql (via systemctl): [ OK ]  [root@ip-172-31-22-44 ~]# yum install libtinfo\*  [root@ip-172-31-22-44 ~]# mysql\_secure\_installation -S /home/maria/data/mysql.sock  NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB  SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY!  In order to log into MariaDB to secure it, we'll need the current  password for the root user. If you've just installed MariaDB, and  you haven't set the root password yet, the password will be blank,  so you should just press enter here.  Enter current password for root (enter for none):  OK, successfully used password, moving on...  Setting the root password ensures that nobody can log into the MariaDB  root user without the proper authorisation.  Set root password? [Y/n] y  New password:mariapassword  Re-enter new password:mariapassword  Password updated successfully!  Reloading privilege tables..  ... Success!  By default, a MariaDB installation has an anonymous user, allowing anyone  to log into MariaDB without having to have a user account created for  them. This is intended only for testing, and to make the installation  go a bit smoother. You should remove them before moving into a  production environment.  Remove anonymous users? [Y/n] y  ... Success!  Normally, root should only be allowed to connect from 'localhost'. This  ensures that someone cannot guess at the root password from the network.  Disallow root login remotely? [Y/n] y  ... Success!  By default, MariaDB comes with a database named 'test' that anyone can  access. This is also intended only for testing, and should be removed  before moving into a production environment.  Remove test database and access to it? [Y/n] y  - Dropping test database...  ... Success!  - Removing privileges on test database...  ... Success!  Reloading the privilege tables will ensure that all changes made so far  will take effect immediately.  Reload privilege tables now? [Y/n] y  ... Success!  Cleaning up...  All done! If you've completed all of the above steps, your MariaDB  installation should now be secure.  Thanks for using MariaDB!  [root@ip-172-31-22-44 ~]# mysql -u root -p  Enter password:mariapassword  Welcome to the MariaDB monitor. Commands end with ; or \g.Your MariaDB connection id is 17.Server version: 10.3.12-MariaDB MariaDB Server  Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  MariaDB [(none)]> select version();  +-----------------+  | version() |  +-----------------+  | 10.3.12-MariaDB |  +-----------------+  1 row in set (0.000 sec) |

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Step - 2 :- Replication setup between both MariaDB servers with GTID

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| MariaDB server 1 🡺 vasu-maria1-pmm-poc 🡺 172.31.22.44 [Private IP Address]  MariaDB server 2 🡺 vasu-maria2-pmm-poc 🡺 172.31.16.154[Private IP Address ] |

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| (1) Add the entry on configuration files, and make sure the binlogs are enabled. [ In Main Server ]  (2) Restart the main server service  MariaDB [(none)]> system hostname -I  172.31.22.44  MariaDB [(none)]> show variables like '%log\_bin%';  +---------------------------------+---------------------------+  | Variable\_name | Value |  +---------------------------------+---------------------------+  | log\_bin | ON |  | log\_bin\_basename | /home/maria/data/ON |  | log\_bin\_compress | OFF |  | log\_bin\_compress\_min\_len | 256 |  | log\_bin\_index | /home/maria/data/ON.index |  | log\_bin\_trust\_function\_creators | OFF |  | sql\_log\_bin | ON |  +---------------------------------+---------------------------+  7 rows in set (0.001 sec)  MariaDB [(none)]> show binary logs;  +-----------+-----------+  | Log\_name | File\_size |  +-----------+-----------+  | ON.000001 | 321 |  +-----------+-----------+  1 row in set (0.000 sec)  MariaDB [(none)]> SHOW MASTER STATUS;  +-----------+----------+--------------+------------------+  | File | Position | Binlog\_Do\_DB | Binlog\_Ignore\_DB |  +-----------+----------+--------------+------------------+  | ON.000001 | 321 | | |  +-----------+----------+--------------+------------------+  1 row in set (0.000 sec)  (3) Create replication user in main Server ..  MariaDB [(none)]> select user,host,password from mysql.user;  +------+-----------+-------------------------------------------+  | user | host | password |  +------+-----------+-------------------------------------------+  | root | localhost | \*84A39D41433A3044C57427018E7C05C80B363C48 |  | root | 127.0.0.1 | \*84A39D41433A3044C57427018E7C05C80B363C48 |  | root | ::1 | \*84A39D41433A3044C57427018E7C05C80B363C48 |  +------+-----------+-------------------------------------------+  3 rows in set (0.000 sec)  MariaDB [(none)]> CREATE USER 'replication'@'%' IDENTIFIED BY 'replication';  Query OK, 0 rows affected (0.001 sec)  MariaDB [(none)]> GRANT REPLICATION SLAVE ON \*.\* to 'replication'@'%';  Query OK, 0 rows affected (0.002 sec)  MariaDB [(none)]> FLUSH PRIVILEGES;  Query OK, 0 rows affected (0.002 sec)  MariaDB [(none)]> select user,host,password from mysql.user;  +-------------+-----------+-------------------------------------------+  | user | host | password |  +-------------+-----------+-------------------------------------------+  | root | localhost | \*84A39D41433A3044C57427018E7C05C80B363C48 |  | root | 127.0.0.1 | \*84A39D41433A3044C57427018E7C05C80B363C48 |  | root | ::1 | \*84A39D41433A3044C57427018E7C05C80B363C48 |  | replication | % | \*D36660B5249B066D7AC5A1A14CECB71D36944CBC |  +-------------+-----------+-------------------------------------------+  4 rows in set (0.000 sec)  (4) On replica Server :-  Add slave parameter in my.cnf. Make sure the server\_id is different from master server. Since this is slave for read only access, making the read\_only: ON  MariaDB [(none)]> system hostname -I  172.31.16.154  MariaDB [(none)]> show variables like '%read\_only%';  +------------------+-------+  | Variable\_name | Value |  +------------------+-------+  | innodb\_read\_only | OFF |  | read\_only | ON |  | tx\_read\_only | OFF |  +------------------+-------+  3 rows in set (0.001 sec)  MariaDB [(none)]> show variables like '%server%';  +---------------------------------+------------------------+  | Variable\_name | Value |  +---------------------------------+------------------------+  | character\_set\_server | utf8mb4 |  | collation\_server | utf8mb4\_unicode\_520\_ci |  | innodb\_ft\_server\_stopword\_table | |  | server\_id | 2 |  +---------------------------------+------------------------+  4 rows in set (0.001 sec)  (5) Run the CHANGE MASTER and start the slave :-  MariaDB [(none)]> system hostname -I  172.31.16.154  MariaDB [(none)]> CHANGE MASTER TO MASTER\_HOST='172.31.22.44', MASTER\_USER='replication', MASTER\_PASSWORD='replication', MASTER\_LOG\_FILE='ON.000001', MASTER\_LOG\_POS=776;  Query OK, 0 rows affected (0.010 sec)  MariaDB [(none)]> START SLAVE;  Query OK, 0 rows affected (0.001 sec)  MariaDB [(none)]> SHOW SLAVE STATUS\G  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 1. row \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  Slave\_IO\_State: Waiting for master to send event  Master\_Host: 172.31.22.44  Master\_User: replication  Master\_Port: 3306  Connect\_Retry: 60  Master\_Log\_File: ON.000001  Read\_Master\_Log\_Pos: 776  Relay\_Log\_File: ip-172-31-16-154-relay-bin.000002  Relay\_Log\_Pos: 548  Relay\_Master\_Log\_File: ON.000001  Slave\_IO\_Running: Yes  Slave\_SQL\_Running: Yes  Replicate\_Do\_DB:  Replicate\_Ignore\_DB:  Replicate\_Do\_Table:  Replicate\_Ignore\_Table:  Replicate\_Wild\_Do\_Table:  Replicate\_Wild\_Ignore\_Table:  Last\_Errno: 0  Last\_Error:  Skip\_Counter: 0  Exec\_Master\_Log\_Pos: 776  Relay\_Log\_Space: 868  Until\_Condition: None  Until\_Log\_File:  Until\_Log\_Pos: 0  Master\_SSL\_Allowed: No  Master\_SSL\_CA\_File:  Master\_SSL\_CA\_Path:  Master\_SSL\_Cert:  Master\_SSL\_Cipher:  Master\_SSL\_Key:  Seconds\_Behind\_Master: 0  Master\_SSL\_Verify\_Server\_Cert: No  Last\_IO\_Errno: 0  Last\_IO\_Error:  Last\_SQL\_Errno: 0  Last\_SQL\_Error:  Replicate\_Ignore\_Server\_Ids:  Master\_Server\_Id: 1  Master\_SSL\_Crl:  Master\_SSL\_Crlpath:  Using\_Gtid: No  Gtid\_IO\_Pos:  Replicate\_Do\_Domain\_Ids:  Replicate\_Ignore\_Domain\_Ids:  Parallel\_Mode: conservative  SQL\_Delay: 0  SQL\_Remaining\_Delay: NULL  Slave\_SQL\_Running\_State: Slave has read all relay log; waiting for the slave I/O thread to update it  Slave\_DDL\_Groups: 0  Slave\_Non\_Transactional\_Groups: 0  Slave\_Transactional\_Groups: 0  1 row in set (0.000 sec)  (6) Verification for Replication :-  In Main server :-  MariaDB [(none)]> system hostname -I  172.31.22.44  MariaDB [(none)]> show databases;  +--------------------+  | Database |  +--------------------+  | information\_schema |  | mysql |  | performance\_schema |  +--------------------+  3 rows in set (0.001 sec)  MariaDB [(none)]> CREATE DATABASE replication;  Query OK, 1 row affected (0.002 sec)  MariaDB [(none)]> show databases;  +--------------------+  | Database |  +--------------------+  | information\_schema |  | mysql |  | performance\_schema |  | replication |  +--------------------+  4 rows in set (0.000 sec)  In replica server :-  MariaDB [(none)]> system hostname -I  172.31.16.154  MariaDB [(none)]> show databases;  +--------------------+  | Database |  +--------------------+  | information\_schema |  | mysql |  | performance\_schema |  | replication |  +--------------------+  4 rows in set (0.001 sec)  (7) Replication by GTID :-  Add the below parameters in main server for the my.cnf and then restart the server.  server\_id=1  log\_slave\_updates=1  sync\_binlog=1  innodb\_flush\_log\_at\_trx\_commit=1  gtid-domain-id=22  (8) Get the co-ordinates on mysql master server.  In Main Server :-  MariaDB [(none)]> system hostname -I  172.31.22.44  MariaDB [(none)]> SHOW MASTER STATUS;  +-----------+----------+--------------+------------------+  | File | Position | Binlog\_Do\_DB | Binlog\_Ignore\_DB |  +-----------+----------+--------------+------------------+  | ON.000003 | 335 | | |  +-----------+----------+--------------+------------------+  1 row in set (0.000 sec)  MariaDB [(none)]> SELECT BINLOG\_GTID\_POS('ON.000003',335);  +----------------------------------+  | BINLOG\_GTID\_POS('ON.000003',335) |  +----------------------------------+  | 0-1-4 |  +----------------------------------+  1 row in set (0.000 sec)  In replica Server :-  MariaDB [(none)]> system hostname -I  172.31.16.154  MariaDB [(none)]> SHOW SLAVE STATUS\G  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 1. row \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  Slave\_IO\_State: Waiting for master to send event  Master\_Host: 172.31.22.44  Master\_User: replication  Master\_Port: 3306  Connect\_Retry: 60  Master\_Log\_File: ON.000003  Read\_Master\_Log\_Pos: 335  Relay\_Log\_File: ip-172-31-16-154-relay-bin.000005  Relay\_Log\_Pos: 627  Relay\_Master\_Log\_File: ON.000003  Slave\_IO\_Running: Yes  Slave\_SQL\_Running: Yes  Replicate\_Do\_DB:  Replicate\_Ignore\_DB:  Replicate\_Do\_Table:  Replicate\_Ignore\_Table:  Replicate\_Wild\_Do\_Table:  Replicate\_Wild\_Ignore\_Table:  Last\_Errno: 0  Last\_Error:  Skip\_Counter: 0  Exec\_Master\_Log\_Pos: 335  Relay\_Log\_Space: 1318  Until\_Condition: None  Until\_Log\_File:  Until\_Log\_Pos: 0  Master\_SSL\_Allowed: No  Master\_SSL\_CA\_File:  Master\_SSL\_CA\_Path:  Master\_SSL\_Cert:  Master\_SSL\_Cipher:  Master\_SSL\_Key:  Seconds\_Behind\_Master: 0  Master\_SSL\_Verify\_Server\_Cert: No  Last\_IO\_Errno: 0  Last\_IO\_Error:  Last\_SQL\_Errno: 0  Last\_SQL\_Error:  Replicate\_Ignore\_Server\_Ids:  Master\_Server\_Id: 1  Master\_SSL\_Crl:  Master\_SSL\_Crlpath:  Using\_Gtid: No  Gtid\_IO\_Pos:  Replicate\_Do\_Domain\_Ids:  Replicate\_Ignore\_Domain\_Ids:  Parallel\_Mode: conservative  SQL\_Delay: 0  SQL\_Remaining\_Delay: NULL  Slave\_SQL\_Running\_State: Slave has read all relay log; waiting for the slave I/O thread to update it  Slave\_DDL\_Groups: 1  Slave\_Non\_Transactional\_Groups: 0  Slave\_Transactional\_Groups: 0  1 row in set (0.000 sec)  MariaDB [(none)]> STOP SLAVE;  Query OK, 0 rows affected (0.002 sec)  MariaDB [(none)]> SET GLOBAL gtid\_slave\_pos = '0-1-4';  Query OK, 0 rows affected (0.015 sec)  MariaDB [(none)]> CHANGE MASTER TO master\_use\_gtid=slave\_pos;  Query OK, 0 rows affected (0.005 sec)  MariaDB [(none)]> START SLAVE;  Query OK, 0 rows affected (0.008 sec)  MariaDB [(none)]> SHOW SLAVE STATUS\G  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 1. row \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  Slave\_IO\_State: Waiting for master to send event  Master\_Host: 172.31.22.44  Master\_User: replication  Master\_Port: 3306  Connect\_Retry: 60  Master\_Log\_File: ON.000003  Read\_Master\_Log\_Pos: 335  Relay\_Log\_File: ip-172-31-16-154-relay-bin.000002  Relay\_Log\_Pos: 627  Relay\_Master\_Log\_File: ON.000003  Slave\_IO\_Running: Yes  Slave\_SQL\_Running: Yes  Replicate\_Do\_DB:  Replicate\_Ignore\_DB:  Replicate\_Do\_Table:  Replicate\_Ignore\_Table:  Replicate\_Wild\_Do\_Table:  Replicate\_Wild\_Ignore\_Table:  Last\_Errno: 0  Last\_Error:  Skip\_Counter: 0  Exec\_Master\_Log\_Pos: 335  Relay\_Log\_Space: 947  Until\_Condition: None  Until\_Log\_File:  Until\_Log\_Pos: 0  Master\_SSL\_Allowed: No  Master\_SSL\_CA\_File:  Master\_SSL\_CA\_Path:  Master\_SSL\_Cert:  Master\_SSL\_Cipher:  Master\_SSL\_Key:  Seconds\_Behind\_Master: 0  Master\_SSL\_Verify\_Server\_Cert: No  Last\_IO\_Errno: 0  Last\_IO\_Error:  Last\_SQL\_Errno: 0  Last\_SQL\_Error:  Replicate\_Ignore\_Server\_Ids:  Master\_Server\_Id: 1  Master\_SSL\_Crl:  Master\_SSL\_Crlpath:  Using\_Gtid: Slave\_Pos  Gtid\_IO\_Pos: 0-1-4  Replicate\_Do\_Domain\_Ids:  Replicate\_Ignore\_Domain\_Ids:  Parallel\_Mode: conservative  SQL\_Delay: 0  SQL\_Remaining\_Delay: NULL  Slave\_SQL\_Running\_State: Slave has read all relay log; waiting for the slave I/O thread to update it  Slave\_DDL\_Groups: 1  Slave\_Non\_Transactional\_Groups: 0  Slave\_Transactional\_Groups: 0  1 row in set (0.000 sec)  (9) Verification GTID setup for main and Replica servers  In Main server :  MariaDB [(none)]> system hostname -I  172.31.22.44  MariaDB [(none)]> SHOW DATABASES;  +--------------------+  | Database |  +--------------------+  | information\_schema |  | mysql |  | performance\_schema |  | replication |  +--------------------+  4 rows in set (0.000 sec)  MariaDB [(none)]> create database replication\_gtid;  Query OK, 1 row affected (0.002 sec)  MariaDB [(none)]> show databases;  +--------------------+  | Database |  +--------------------+  | information\_schema |  | mysql |  | performance\_schema |  | replication |  | replication\_gtid |  +--------------------+  5 rows in set (0.000 sec)  In replica Server :-  MariaDB [(none)]> system hostname -I  172.31.16.154  MariaDB [(none)]> show databases;  +--------------------+  | Database |  +--------------------+  | information\_schema |  | mysql |  | performance\_schema |  | replication |  | replication\_gtid |  +--------------------+  5 rows in set (0.000 sec)  GTID is working ........... |

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Step - 3 :- PMM Server Setup in pmm Server

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| MariaDB server 1 🡺 vasu-maria1-pmm-poc 🡺 172.31.22.44 [Private IP Address]  MariaDB server 2 🡺 vasu-maria2-pmm-poc 🡺 172.31.16.154[Private IP Address ]  PMM server 🡺 vasu-pmm-poc 🡺 172.31.17.0 [ Private IP Address ]  34.230.88.10 [ Public Ip address ]  I have created Elastic IP Address for all 3 Servers..  Main Server  Replica Server  PMM Server  Now public IP Address for above servers .  vasu-maria1-pmm-poc ==> 44.196.150.226  vasu-maria2-pmm-poc ==> 34.228.90.130  vasu-pmm-poc ==> 44.196.179.230 |

Install Percona Monitoring and Management

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Step 1: Install Server

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| Applies to: All Docker compatible \*nix based systems  (1) Requirements: Docker  [root@ip-172-31-17-0 ~]# yum install docker  [root@ip-172-31-17-0 ~]# rpm -qa | grep -i docker  docker-20.10.4-1.amzn2.x86\_64  [root@ip-172-31-17-0 ~]# service docker status  Redirecting to /bin/systemctl status docker.service  ● docker.service - Docker Application Container Engine  Loaded: loaded (/usr/lib/systemd/system/docker.service; disabled; vendor preset: disabled)  Active: inactive (dead)  Docs: https://docs.docker.com  [root@ip-172-31-17-0 ~]# service docker start  Redirecting to /bin/systemctl start docker.service  [root@ip-172-31-17-0 ~]# service docker status  Redirecting to /bin/systemctl status docker.service  ● docker.service - Docker Application Container Engine  Loaded: loaded (/usr/lib/systemd/system/docker.service; disabled; vendor preset: disabled)  Active: active (running) since Thu 2021-07-29 13:40:58 UTC; 1s ago  Docs: https://docs.docker.com  Process: 3647 ExecStartPre=/usr/libexec/docker/docker-setup-runtimes.sh (code=exited, status=0/SUCCESS)  Process: 3636 ExecStartPre=/bin/mkdir -p /run/docker (code=exited, status=0/SUCCESS)  Main PID: 3658 (dockerd)  Tasks: 9  Memory: 38.8M  CGroup: /system.slice/docker.service  └─3658 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock --default-ulimit nofile=1024:4096  Jul 29 13:40:57 ip-172-31-17-0.ec2.internal dockerd[3658]: time="2021-07-29T13:40:57.617345293Z" level=info msg="scheme \"unix\" not regi...e=grpc  Jul 29 13:40:57 ip-172-31-17-0.ec2.internal dockerd[3658]: time="2021-07-29T13:40:57.617364421Z" level=info msg="ccResolverWrapper: sendi...e=grpc  Jul 29 13:40:57 ip-172-31-17-0.ec2.internal dockerd[3658]: time="2021-07-29T13:40:57.617387861Z" level=info msg="ClientConn switching bal...e=grpc  Jul 29 13:40:57 ip-172-31-17-0.ec2.internal dockerd[3658]: time="2021-07-29T13:40:57.666097590Z" level=info msg="Loading containers: start."  Jul 29 13:40:57 ip-172-31-17-0.ec2.internal dockerd[3658]: time="2021-07-29T13:40:57.928408050Z" level=info msg="Default bridge (docker0)...dress"  Jul 29 13:40:58 ip-172-31-17-0.ec2.internal dockerd[3658]: time="2021-07-29T13:40:58.118184672Z" level=info msg="Loading containers: done."  Jul 29 13:40:58 ip-172-31-17-0.ec2.internal dockerd[3658]: time="2021-07-29T13:40:58.145315685Z" level=info msg="Docker daemon" commit=36...0.10.4  Jul 29 13:40:58 ip-172-31-17-0.ec2.internal dockerd[3658]: time="2021-07-29T13:40:58.145422948Z" level=info msg="Daemon has completed ini...ation"  Jul 29 13:40:58 ip-172-31-17-0.ec2.internal systemd[1]: Started Docker Application Container Engine.  Jul 29 13:40:58 ip-172-31-17-0.ec2.internal dockerd[3658]: time="2021-07-29T13:40:58.173852614Z" level=info msg="API listen on /run/docker.sock"  Hint: Some lines were ellipsized, use -l to show in full.  (2) Create data volume:  [root@ip-172-31-17-0 ~]# sudo docker create -v /srv --name pmm-data percona/pmm-server:2 /bin/true  Unable to find image 'percona/pmm-server:2' locally  2: Pulling from percona/pmm-server  2d473b07cdd5: Pull complete  178efec65a21: Pull complete  Digest: sha256:65c654312070ac08cecb8d2be203d04ad018cfb646b7a8ff800f8927a05c9944  Status: Downloaded newer image for percona/pmm-server:2  1f3c4b2703d187da2318ca3fdfaad16c0360b7e0ca5f9ab00542cf54544946b7  [root@ip-172-31-17-0 ~]# docker ps -a  CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES  1f3c4b2703d1 percona/pmm-server:2 "/bin/true" 50 seconds ago Created pmm-data  (3) Create pmm-server docker container:  [root@ip-172-31-17-0 ~]# sudo docker run -d -p 80:80 -p 443:443 --volumes-from pmm-data --name pmm-server --restart always percona/pmm-server:2  440e11f9237e7d92d356b7da7c4e702560f99f9870106d3a205d5ea07823301b  [root@ip-172-31-17-0 ~]# docker ps -a  CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES  440e11f9237e percona/pmm-server:2 "/opt/entrypoint.sh" 2 hours ago Up 2 hours (healthy) 0.0.0.0:80->80/tcp, 0.0.0.0:443->443/tcp pmm-server  1f3c4b2703d1 percona/pmm-server:2 "/bin/true" 2 hours ago Created pmm-data  (4) Connect to Percona Monitoring and Management:  https://<IP Address or hostname of your Percona Monitoring and Management Server>:443  http://34.230.88.10:443 ===========> This is my public ipaddress of EC2 machine . If i give Private ipaddress , it was not connecting .. so i given public Ipaddress and able to login  or  http://34.230.88.10/  Default username/password is admin/admin and should be changed on first login |

Step 2: Install Client

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pmm-client we have to install in 2 MariaDB servers [ If we have replication , we should install pmm-client in both servers ].

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| (1) Download and install Percona Repo Package  Connect to the Main [ Master ] Server , install pmm-client.  --------------------------------------------------------------  [root@ip-172-31-22-44 ~]# hostname -I  172.31.22.44  [root@ip-172-31-22-44 ~]# pwd  /root  [root@ip-172-31-22-44 ~]# ls -ltr  -rw-------. 1 root root 6699 May 4 17:33 original-ks.cfg  -rw-------. 1 root root 6953 May 4 17:33 anaconda-ks.cfg  [root@ip-172-31-22-44 ~]# hostname -I  172.31.22.44  [root@ip-172-31-22-44 ~]# sudo yum install https://repo.percona.com/yum/percona-release-latest.noarch.rpm  Updating Subscription Management repositories.  Unable to read consumer identity  This system is not registered to Red Hat Subscription Management. You can use subscription-manager to register.  Last metadata expiration check: 3:27:46 ago on Thu 29 Jul 2021 12:07:31 PM UTC.  percona-release-latest.noarch.rpm 324 kB/s | 19 kB 00:00  Dependencies resolved.  ===========================================================================  Package Architecture Version Repository Size  ===========================================================================  Installing:  percona-release noarch 1.0-26 @commandline 19 k  Transaction Summary  ===========================================================================  Install 1 Package  Total size: 19 k  Installed size: 31 k  Is this ok [y/N]: y  Downloading Packages:  Running transaction check  Transaction check succeeded.  Running transaction test  Transaction test succeeded.  Running transaction  Preparing : 1/1  Installing : percona-release-1.0-26.noarch 1/1  Running scriptlet: percona-release-1.0-26.noarch 1/1  \* Enabling the Percona Original repository  <\*> All done!  \* Enabling the Percona Release repository  <\*> All done!  The percona-release package now contains a percona-release script that can enable additional repositories for our newer products.  For example, to enable the Percona Server 8.0 repository use:  percona-release setup ps80  Note: To avoid conflicts with older product versions, the percona-release setup command may disable our original repository for some products.  For more information, please visit:  https://www.percona.com/doc/percona-repo-config/percona-release.html  Verifying : percona-release-1.0-26.noarch 1/1  Installed products updated.  Installed:  percona-release-1.0-26.noarch  Complete!  Connect to the replica [ slave ] Server , install pmm-client.  ----------------------------------------------------------------  [root@ip-172-31-16-154 ~]# pwd  /root  [root@ip-172-31-16-154 ~]# hostname -I  172.31.16.154  [root@ip-172-31-16-154 ~]# sudo yum install https://repo.percona.com/yum/percona-release-latest.noarch.rpm  Updating Subscription Management repositories.  Unable to read consumer identity  This system is not registered to Red Hat Subscription Management. You can use subscription-manager to register.  Last metadata expiration check: 4:31:00 ago on Thu 29 Jul 2021 12:34:38 PM UTC.  percona-release-latest.noarch.rpm 57 kB/s | 19 kB 00:00  Dependencies resolved.  ===========================================================================  Package Architecture Version Repository Size  ===========================================================================  Installing:  percona-release noarch 1.0-26 @commandline 19 k  Transaction Summary  ===========================================================================  Install 1 Package  Total size: 19 k  Installed size: 31 k  Is this ok [y/N]: y  Downloading Packages:  Running transaction check  Transaction check succeeded.  Running transaction test  Transaction test succeeded.  Running transaction  Preparing : 1/1  Installing : percona-release-1.0-26.noarch 1/1  Running scriptlet: percona-release-1.0-26.noarch 1/1  \* Enabling the Percona Original repository  <\*> All done!  \* Enabling the Percona Release repository  <\*> All done!  The percona-release package now contains a percona-release script that can enable additional repositories for our newer products.  For example, to enable the Percona Server 8.0 repository use:  percona-release setup ps80  Note: To avoid conflicts with older product versions, the percona-release setup command may disable our original repository for some products.  For more information, please visit:  https://www.percona.com/doc/percona-repo-config/percona-release.html  Verifying : percona-release-1.0-26.noarch 1/1  Installed products updated.  Installed:  percona-release-1.0-26.noarch  Complete!  (2) Install Percona Monitoring and Management Client  In Main DB server [ Master ] :-  ----------------------------------  [root@ip-172-31-22-44 ~]# hostname -I  172.31.22.44  [root@ip-172-31-22-44 ~]# sudo yum install pmm2-client  Updating Subscription Management repositories.  Unable to read consumer identity  This system is not registered to Red Hat Subscription Management. You can use subscription-manager to register.  Percona Original release/x86\_64 YUM repository 2.7 MB/s | 6.9 MB 00:02  Percona Original release/noarch YUM repository 109 kB/s | 3.4 kB 00:00  Percona Release release/noarch YUM repository 48 kB/s | 1.6 kB 00:00  Dependencies resolved.  ===========================================================================  Package Architecture Version Repository Size  ===========================================================================  Installing:  pmm2-client x86\_64 2.19.0-6.el8 percona-release-x86\_64 43 M  Transaction Summary  ===========================================================================  Install 1 Package  Total download size: 43 M  Installed size: 43 M  Is this ok [y/N]: y  Downloading Packages:  pmm2-client-2.19.0-6.el8.x86\_64.rpm 18 MB/s | 43 MB 00:02  ---------------------------------------------------------------------------  Total 18 MB/s | 43 MB 00:02  warning: /var/cache/dnf/percona-release-x86\_64-018d36333a0b53bc/packages/pmm2-client-2.19.0-6.el8.x86\_64.rpm: Header V4 RSA/SHA256 Signature, key ID 8507efa5: NOKEY  Percona Original release/x86\_64 YUM repository 4.5 MB/s | 4.7 kB 00:00  Importing GPG key 0x8507EFA5:  Userid : "Percona Development Team (Packaging key) <info@percona.com>"  Fingerprint: 4D1B B29D 63D9 8E42 2B21 13B1 9334 A25F 8507 EFA5  From : /etc/pki/rpm-gpg/PERCONA-PACKAGING-KEY  Is this ok [y/N]: y  Key imported successfully  Running transaction check  Transaction check succeeded.  Running transaction test  Transaction test succeeded.  Running transaction  Preparing : 1/1  Running scriptlet: pmm2-client-2.19.0-6.el8.x86\_64 1/1  Installing : pmm2-client-2.19.0-6.el8.x86\_64 1/1  Running scriptlet: pmm2-client-2.19.0-6.el8.x86\_64 1/1  Verifying : pmm2-client-2.19.0-6.el8.x86\_64 1/1  Installed products updated.  Installed:  pmm2-client-2.19.0-6.el8.x86\_64  Complete!  In Replica DB server [ Slave ] :-  ----------------------------------  [root@ip-172-31-16-154 ~]# hostname -I  172.31.16.154  [root@ip-172-31-16-154 ~]# sudo yum install pmm2-client  Updating Subscription Management repositories.  Unable to read consumer identity  This system is not registered to Red Hat Subscription Management. You can use subscription-manager to register.  Percona Original release/x86\_64 YUM repository 2.3 MB/s | 6.9 MB 00:03  Percona Original release/noarch YUM repository 21 kB/s | 3.4 kB 00:00  Percona Release release/noarch YUM repository 47 kB/s | 1.6 kB 00:00  Dependencies resolved.  ===========================================================================  Package Architecture Version Repository Size  ===========================================================================  Installing:    pmm2-client x86\_64 2.19.0-6.el8 percona-release-x86\_64 43 M  Transaction Summary  ===========================================================================  Install 1 Package  Total download size: 43 M  Installed size: 43 M  Is this ok [y/N]: y  Downloading Packages:  pmm2-client-2.19.0-6.el8.x86\_64.rpm 20 MB/s | 43 MB 00:02  ---------------------------------------------------------------------------  Total 20 MB/s | 43 MB 00:02  warning: /var/cache/dnf/percona-release-x86\_64-018d36333a0b53bc/packages/pmm2-client-2.19.0-6.el8.x86\_64.rpm: Header V4 RSA/SHA256 Signature, key ID 8507efa5: NOKEY  Percona Original release/x86\_64 YUM repository 4.5 MB/s | 4.7 kB 00:00  Importing GPG key 0x8507EFA5:  Userid : "Percona Development Team (Packaging key) <info@percona.com>"  Fingerprint: 4D1B B29D 63D9 8E42 2B21 13B1 9334 A25F 8507 EFA5  From : /etc/pki/rpm-gpg/PERCONA-PACKAGING-KEY  Is this ok [y/N]: y  Key imported successfully  Running transaction check  Transaction check succeeded.  Running transaction test  Transaction test succeeded.  Running transaction  Preparing : 1/1  Running scriptlet: pmm2-client-2.19.0-6.el8.x86\_64 1/1  Installing : pmm2-client-2.19.0-6.el8.x86\_64 1/1  Running scriptlet: pmm2-client-2.19.0-6.el8.x86\_64 1/1  Verifying : pmm2-client-2.19.0-6.el8.x86\_64 1/1  Installed products updated.  Installed:  pmm2-client-2.19.0-6.el8.x86\_64  Complete! |

Step 3: Connect Client to Server

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Applies to: All (optional if only using AWS Monitoring)

Requirements: Client to server communication to secure port on pmm-server (443 assumed) — must be performed on every system to be monitored.

Register Percona Monitoring and Management client with server

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| In Main Server [ Master ] :- [ Here 44.196.179.230 is PMM Public IpAddress. ]  -----------------------------  [root@ip-172-31-22-44 ~]# hostname -I  172.31.22.44  [root@ip-172-31-22-44 ~]# sudo pmm-admin config --server-insecure-tls --server-url=https://admin:admin@44.196.179.230  Checking local pmm-agent status...  pmm-agent is running.  Registering pmm-agent on PMM Server...  Registered.  Configuration file /usr/local/percona/pmm2/config/pmm-agent.yaml updated.  Reloading pmm-agent configuration...  Configuration reloaded.  Checking local pmm-agent status...  pmm-agent is running.  [root@ip-172-31-22-44 ~]#  In Replica Server [ Slave ] :-  ----------------------------------  [root@ip-172-31-16-154 ~]# hostname -I  172.31.16.154  [root@ip-172-31-16-154 ~]# sudo pmm-admin config --server-insecure-tls --server-url=https://admin:admin@44.196.179.230  Checking local pmm-agent status...  pmm-agent is running.  Registering pmm-agent on PMM Server...  Registered.  Configuration file /usr/local/percona/pmm2/config/pmm-agent.yaml updated.  Reloading pmm-agent configuration...  Configuration reloaded.  Checking local pmm-agent status...  pmm-agent is running.  [root@ip-172-31-16-154 ~]# |

Step 4: Monitor Database

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Applies to: All

Requirements: Server to client communication over ports, 42000 - 51999 by default.

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| (1) Create a Percona Monitoring and Management specific user for monitoring (using mysql CLI)  In Main Server [ Master ] :-  ----------------------------------  [root@ip-172-31-22-44 ~]# hostname -I  172.31.22.44  [root@ip-172-31-22-44 ~]# mysql -u root -p  Enter password:mariapassword  Welcome to the MariaDB monitor. Commands end with ; or \g.Your MariaDB connection id is 15.Server version: 10.3.12-MariaDB-log MariaDB Server  Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  MariaDB [(none)]> select user,host,password from mysql.user;  +-------------+-----------+-------------------------------------------+  | user | host | password |  +-------------+-----------+-------------------------------------------+  | root | localhost | \*84A39D41433A3044C57427018E7C05C80B363C48 |  | root | 127.0.0.1 | \*84A39D41433A3044C57427018E7C05C80B363C48 |  | root | ::1 | \*84A39D41433A3044C57427018E7C05C80B363C48 |  | replication | % | \*D36660B5249B066D7AC5A1A14CECB71D36944CBC |  +-------------+-----------+-------------------------------------------+  4 rows in set (0.000 sec)  MariaDB [(none)]> CREATE USER 'pmm'@'%' IDENTIFIED BY 'pmm' WITH MAX\_USER\_CONNECTIONS 10;  Query OK, 0 rows affected (0.002 sec)  MariaDB [(none)]> GRANT SELECT, PROCESS, SUPER, REPLICATION CLIENT, RELOAD ON \*.\* TO 'pmm'@'%';  Query OK, 0 rows affected (0.002 sec)  MariaDB [(none)]> FLUSH PRIVILEGES;  Query OK, 0 rows affected (0.004 sec)  In Replica Server [ Slave ]:-  ------------------------------------  [root@ip-172-31-16-154 ~]# hostname -I  172.31.16.154  [root@ip-172-31-16-154 ~]# mysql -u root -pmariapassword  Welcome to the MariaDB monitor. Commands end with ; or \g.Your MariaDB connection id is 17.Server version: 10.3.12-MariaDB MariaDB Server  Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  MariaDB [(none)]> select user,host,password from mysql.user;  +------+-----------+-------------------------------------------+  | user | host | password |  +------+-----------+-------------------------------------------+  | root | localhost | \*84A39D41433A3044C57427018E7C05C80B363C48 |  | root | 127.0.0.1 | \*84A39D41433A3044C57427018E7C05C80B363C48 |  | root | ::1 | \*84A39D41433A3044C57427018E7C05C80B363C48 |  | pmm | % | \*E5AE1591B8643BFA224135CDDFD6EB8B303DC33E |  +------+-----------+-------------------------------------------+  4 rows in set (0.000 sec)  (2) Database Configuration:-  -----------------------------  For the MariaDB/MySQL database being monitored, enable following settings as best practice:  innodb\_monitor\_enable=all  performance\_schema=ON  In Main Server [ Master ] :-  ------------------------  MariaDB [(none)]> system hostname -I  172.31.22.44  MariaDB [(none)]> show variables like '%performance%';  +--------------------------------------------------------+-------+  | Variable\_name | Value |  +--------------------------------------------------------+-------+  | performance\_schema | OFF |  | performance\_schema\_accounts\_size | -1 |  | performance\_schema\_digests\_size | -1 |  | performance\_schema\_events\_stages\_history\_long\_size | -1 |  | performance\_schema\_events\_stages\_history\_size | -1 |  | performance\_schema\_events\_statements\_history\_long\_size | -1 |  | performance\_schema\_events\_statements\_history\_size | -1 |  | performance\_schema\_events\_waits\_history\_long\_size | -1 |  | performance\_schema\_events\_waits\_history\_size | -1 |  | performance\_schema\_hosts\_size | -1 |  | performance\_schema\_max\_cond\_classes | 80 |  | performance\_schema\_max\_cond\_instances | -1 |  | performance\_schema\_max\_digest\_length | 1024 |  | performance\_schema\_max\_file\_classes | 50 |  | performance\_schema\_max\_file\_handles | 32768 |  | performance\_schema\_max\_file\_instances | -1 |  | performance\_schema\_max\_mutex\_classes | 200 |  | performance\_schema\_max\_mutex\_instances | -1 |  | performance\_schema\_max\_rwlock\_classes | 40 |  | performance\_schema\_max\_rwlock\_instances | -1 |  | performance\_schema\_max\_socket\_classes | 10 |  | performance\_schema\_max\_socket\_instances | -1 |  | performance\_schema\_max\_stage\_classes | 160 |  | performance\_schema\_max\_statement\_classes | 200 |  | performance\_schema\_max\_table\_handles | -1 |  | performance\_schema\_max\_table\_instances | -1 |  | performance\_schema\_max\_thread\_classes | 50 |  | performance\_schema\_max\_thread\_instances | -1 |  | performance\_schema\_session\_connect\_attrs\_size | -1 |  | performance\_schema\_setup\_actors\_size | 100 |  | performance\_schema\_setup\_objects\_size | 100 |  | performance\_schema\_users\_size | -1 |  +--------------------------------------------------------+-------+  32 rows in set (0.001 sec)  MariaDB [(none)]> show variables like 'innodb\_monitor%';  +--------------------------+-------+  | Variable\_name | Value |  +--------------------------+-------+  | innodb\_monitor\_disable | |  | innodb\_monitor\_enable | |  | innodb\_monitor\_reset | |  | innodb\_monitor\_reset\_all | |  +--------------------------+-------+  4 rows in set (0.001 sec)  In Replica Server [ slave ]  ------------------------------------  MariaDB [(none)]> system hostname -I  172.31.16.154  MariaDB [(none)]> show variables like '%performance%';  +--------------------------------------------------------+-------+  | Variable\_name | Value |  +--------------------------------------------------------+-------+  | performance\_schema | OFF |  | performance\_schema\_accounts\_size | -1 |  | performance\_schema\_digests\_size | -1 |  | performance\_schema\_events\_stages\_history\_long\_size | -1 |  | performance\_schema\_events\_stages\_history\_size | -1 |  | performance\_schema\_events\_statements\_history\_long\_size | -1 |  | performance\_schema\_events\_statements\_history\_size | -1 |  | performance\_schema\_events\_waits\_history\_long\_size | -1 |  | performance\_schema\_events\_waits\_history\_size | -1 |  | performance\_schema\_hosts\_size | -1 |  | performance\_schema\_max\_cond\_classes | 80 |  | performance\_schema\_max\_cond\_instances | -1 |  | performance\_schema\_max\_digest\_length | 1024 |  | performance\_schema\_max\_file\_classes | 50 |  | performance\_schema\_max\_file\_handles | 32768 |  | performance\_schema\_max\_file\_instances | -1 |  | performance\_schema\_max\_mutex\_classes | 200 |  | performance\_schema\_max\_mutex\_instances | -1 |  | performance\_schema\_max\_rwlock\_classes | 40 |  | performance\_schema\_max\_rwlock\_instances | -1 |  | performance\_schema\_max\_socket\_classes | 10 |  | performance\_schema\_max\_socket\_instances | -1 |  | performance\_schema\_max\_stage\_classes | 160 |  | performance\_schema\_max\_statement\_classes | 200 |  | performance\_schema\_max\_table\_handles | -1 |  | performance\_schema\_max\_table\_instances | -1 |  | performance\_schema\_max\_thread\_classes | 50 |  | performance\_schema\_max\_thread\_instances | -1 |  | performance\_schema\_session\_connect\_attrs\_size | -1 |  | performance\_schema\_setup\_actors\_size | 100 |  | performance\_schema\_setup\_objects\_size | 100 |  | performance\_schema\_users\_size | -1 |  +--------------------------------------------------------+-------+  32 rows in set (0.001 sec)  MariaDB [(none)]> show variables like 'innodb\_monitor%';  +--------------------------+-------+  | Variable\_name | Value |  +--------------------------+-------+  | innodb\_monitor\_disable | |  | innodb\_monitor\_enable | |  | innodb\_monitor\_reset | |  | innodb\_monitor\_reset\_all | |  +--------------------------+-------+  4 rows in set (0.001 sec)  **Note :- Should enable the below parameters in Main Server and Replica Server in my.cnf and restart the MariaDB database services:-**  innodb\_monitor\_enable = all  performance\_schema = ON  [root@ip-172-31-22-44 ~]# service mysql restart  Starting mysql (via systemctl): [ OK ]  [root@ip-172-31-22-44 ~]#  [root@ip-172-31-16-154 ~]# service mysql restart  Starting mysql (via systemctl): [ OK ]  [root@ip-172-31-16-154 ~]#  In Main Server [ Master ]  --------------------------------------  MariaDB [(none)]> system hostname -I  172.31.22.44  MariaDB [(none)]> show variables like '%performance%';  +--------------------------------------------------------+-------+  | Variable\_name | Value |  +--------------------------------------------------------+-------+  | performance\_schema | ON |  | performance\_schema\_accounts\_size | 100 |  | performance\_schema\_digests\_size | 5000 |  | performance\_schema\_events\_stages\_history\_long\_size | 1000 |  | performance\_schema\_events\_stages\_history\_size | 20 |  | performance\_schema\_events\_statements\_history\_long\_size | 1000 |  | performance\_schema\_events\_statements\_history\_size | 20 |  | performance\_schema\_events\_waits\_history\_long\_size | 1000 |  | performance\_schema\_events\_waits\_history\_size | 20 |  | performance\_schema\_hosts\_size | 100 |  | performance\_schema\_max\_cond\_classes | 80 |  | performance\_schema\_max\_cond\_instances | 1500 |  | performance\_schema\_max\_digest\_length | 1024 |  | performance\_schema\_max\_file\_classes | 50 |  | performance\_schema\_max\_file\_handles | 32768 |  | performance\_schema\_max\_file\_instances | 2500 |  | performance\_schema\_max\_mutex\_classes | 200 |  | performance\_schema\_max\_mutex\_instances | 5858 |  | performance\_schema\_max\_rwlock\_classes | 40 |  | performance\_schema\_max\_rwlock\_instances | 3143 |  | performance\_schema\_max\_socket\_classes | 10 |  | performance\_schema\_max\_socket\_instances | 300 |  | performance\_schema\_max\_stage\_classes | 160 |  | performance\_schema\_max\_statement\_classes | 200 |  | performance\_schema\_max\_table\_handles | 2858 |  | performance\_schema\_max\_table\_instances | 667 |  | performance\_schema\_max\_thread\_classes | 50 |  | performance\_schema\_max\_thread\_instances | 358 |  | performance\_schema\_session\_connect\_attrs\_size | 512 |  | performance\_schema\_setup\_actors\_size | 100 |  | performance\_schema\_setup\_objects\_size | 100 |  | performance\_schema\_users\_size | 100 |  +--------------------------------------------------------+-------+  32 rows in set (0.001 sec)  MariaDB [(none)]> show variables like 'innodb\_monitor%';  +--------------------------+-------+  | Variable\_name | Value |  +--------------------------+-------+  | innodb\_monitor\_disable | |  | innodb\_monitor\_enable | all |  | innodb\_monitor\_reset | |  | innodb\_monitor\_reset\_all | |  +--------------------------+-------+  4 rows in set (0.001 sec)  In Replica Server [ Slave ]  ---------------------------------  MariaDB [(none)]> system hostname -I  172.31.16.154  MariaDB [(none)]> show variables like '%performance%';  +--------------------------------------------------------+-------+  | Variable\_name | Value |  +--------------------------------------------------------+-------+  | performance\_schema | ON |  | performance\_schema\_accounts\_size | 100 |  | performance\_schema\_digests\_size | 5000 |  | performance\_schema\_events\_stages\_history\_long\_size | 1000 |  | performance\_schema\_events\_stages\_history\_size | 20 |  | performance\_schema\_events\_statements\_history\_long\_size | 1000 |  | performance\_schema\_events\_statements\_history\_size | 20 |  | performance\_schema\_events\_waits\_history\_long\_size | 1000 |  | performance\_schema\_events\_waits\_history\_size | 20 |  | performance\_schema\_hosts\_size | 100 |  | performance\_schema\_max\_cond\_classes | 80 |  | performance\_schema\_max\_cond\_instances | 1500 |  | performance\_schema\_max\_digest\_length | 1024 |  | performance\_schema\_max\_file\_classes | 50 |  | performance\_schema\_max\_file\_handles | 32768 |  | performance\_schema\_max\_file\_instances | 2500 |  | performance\_schema\_max\_mutex\_classes | 200 |  | performance\_schema\_max\_mutex\_instances | 5858 |  | performance\_schema\_max\_rwlock\_classes | 40 |  | performance\_schema\_max\_rwlock\_instances | 3143 |  | performance\_schema\_max\_socket\_classes | 10 |  | performance\_schema\_max\_socket\_instances | 300 |  | performance\_schema\_max\_stage\_classes | 160 |  | performance\_schema\_max\_statement\_classes | 200 |  | performance\_schema\_max\_table\_handles | 2858 |  | performance\_schema\_max\_table\_instances | 667 |  | performance\_schema\_max\_thread\_classes | 50 |  | performance\_schema\_max\_thread\_instances | 358 |  | performance\_schema\_session\_connect\_attrs\_size | 512 |  | performance\_schema\_setup\_actors\_size | 100 |  | performance\_schema\_setup\_objects\_size | 100 |  | performance\_schema\_users\_size | 100 |  +--------------------------------------------------------+-------+  32 rows in set (0.001 sec)  MariaDB [(none)]> show variables like 'innodb\_monitor%';  +--------------------------+-------+  | Variable\_name | Value |  +--------------------------+-------+  | innodb\_monitor\_disable | |  | innodb\_monitor\_enable | all |  | innodb\_monitor\_reset | |  | innodb\_monitor\_reset\_all | |  +--------------------------+-------+  4 rows in set (0.001 sec)  (3) Register the server for monitoring  In Main Server :-  -------------------  [root@ip-172-31-22-44 ~]# pmm-admin list  Service type Service name Address and port Service ID  Agent type Status Metrics Mode Agent ID Service ID  pmm\_agent Connected /agent\_id/0f43c776-fd89-4f39-a419-b184cdc6a436  node\_exporter Running push /agent\_id/7a7f6d08-4902-4c91-b107-a5ec629fec9e  vmagent Running push /agent\_id/f2834a31-dcb6-4b6f-a680-0db4cc9cb193  In Replica Server :-  ----------------------  [root@ip-172-31-16-154 ~]# pmm-admin list  Service type Service name Address and port Service ID  Agent type Status Metrics Mode Agent ID Service ID  pmm\_agent Connected /agent\_id/31d09271-b426-465f-ab36-b4aaa4ff4a91  node\_exporter Running push /agent\_id/3a894355-f5d0-472d-9cd9-e0be2242c3c0  vmagent Running push /agent\_id/0b3a5dda-0c5c-445e-85b2-79a127d9c296  Adding MySQL Metrics and Query Analytics  In Main Server :- [ Master ]  --------------------------------  [root@ip-172-31-22-44 ~]# pmm-admin list  Service type Service name Address and port Service ID  Agent type Status Metrics Mode Agent ID Service ID  pmm\_agent Connected /agent\_id/15a54189-68f4-4355-9d71-4da0425f0803  node\_exporter Running push /agent\_id/542b71fd-2122-4581-8a62-544052440838  vmagent Running push /agent\_id/3551cfde-0e88-4561-a5dd-3c4310acecbf  [root@ip-172-31-22-44 ~]# hostname -I  172.31.22.44  **Finally in main Master server , i just kepted like this....**  **Note :- Here Service-name = Should give hostname / any name of Main [ Master ] MariaDB server [ i.e where you are running pmm-admin command you should give the hostname of that server ]**  [root@ip-172-31-22-44 ~]# pmm-admin add mysql --query-source=perfschema --username=pmm --password=pmm --service-name=mariadb\_main\_server\_master --host=172.31.22.44 --port=3306  MySQL Service added.  Service ID : /service\_id/1936f452-6b0f-427c-b68a-df7809138fe3  Service name: mariadb\_main\_server\_master  Table statistics collection enabled (the limit is 1000, the actual table count is 159).  [root@ip-172-31-22-44 ~]# pmm-admin list  Service type Service name Address and port Service ID  MySQL mariadb\_main\_server\_master 172.31.22.44:3306 /service\_id/1936f452-6b0f-427c-b68a-df7809138fe3  Agent type Status Metrics Mode Agent ID Service ID  pmm\_agent Connected /agent\_id/0f43c776-fd89-4f39-a419-b184cdc6a436  node\_exporter Running push /agent\_id/7a7f6d08-4902-4c91-b107-a5ec629fec9e  mysqld\_exporter Running push /agent\_id/44fc15cb-f742-4883-9473-b2ca5c9f3fc5 /service\_id/1936f452-6b0f-427c-b68a-df7809138fe3  mysql\_perfschema\_agent Running /agent\_id/8fe4d5d1-0093-4456-b7f8-027d6a3af079 /service\_id/1936f452-6b0f-427c-b68a-df7809138fe3  vmagent Running push /agent\_id/f2834a31-dcb6-4b6f-a680-0db4cc9cb193  If i want one of the service which we configured above to delete , just login in to PMM , and go to Inventory / Services ==> Select which one you don't want , then run once again omm-admin list command in Main [ Master ] Server .  [root@ip-172-31-22-44 ~]# pmm-admin list  Service type Service name Address and port Service ID  MySQL mariadb\_main\_server1\_master 172.31.22.44:3306 /service\_id/80e610f2-d5ef-49ee-a348-868b14b43aa4  Agent type Status Metrics Mode Agent ID Service ID  pmm\_agent Connected /agent\_id/15a54189-68f4-4355-9d71-4da0425f0803  node\_exporter Running push /agent\_id/542b71fd-2122-4581-8a62-544052440838  mysqld\_exporter Running push /agent\_id/f489f2b4-e480-4b11-b3c5-0a819906a165 /service\_id/80e610f2-d5ef-49ee- a348-868b14b43aa4  mysql\_perfschema\_agent Running /agent\_id/0186acab-2a48-441f-a81c-2c4369b02c7a /service\_id/80e610f2-d5ef-49ee- a348-868b14b43aa4  vmagent Running push /agent\_id/3551cfde-0e88-4561-a5dd-3c4310acecbf  [root@ip-172-31-22-44 ~]# pmm-admin add mysql --query-source=slowlog --username=pmm --password=pmm mariadb\_main\_server\_master\_slow\_sql ========> This is slow query log report  MySQL Service added.  Service ID : /service\_id/3f4b86f9-b437-4104-9a48-6eb7094cd47f  Service name: mariadb\_main\_server\_master\_slow\_sql  Table statistics collection enabled (the limit is 1000, the actual table count is 159).  [root@ip-172-31-22-44 ~]# pmm-admin list  Service type Service name Address and port Service ID  MySQL mariadb\_main\_server\_master 172.31.22.44:3306 /service\_id/1936f452-6b0f-427c-b68a-df7809138fe3  MySQL mariadb\_main\_server\_master\_slow\_sql 127.0.0.1:3306 /service\_id/3f4b86f9-b437-4104-9a48-6eb7094cd47f  Agent type Status Metrics Mode Agent ID Service ID  pmm\_agent Connected /agent\_id/0f43c776-fd89-4f39-a419-b184cdc6a436  node\_exporter Running push /agent\_id/7a7f6d08-4902-4c91-b107-a5ec629fec9e  mysqld\_exporter Running push /agent\_id/3841edbe-5bad-4622-a4f6-bedd0caeda79 /service\_id/3f4b86f9-b437-4104-9a48-6eb7094cd47f  mysqld\_exporter Running push /agent\_id/44fc15cb-f742-4883-9473-b2ca5c9f3fc5 /service\_id/1936f452-6b0f-427c-b68a-df7809138fe3  mysql\_perfschema\_agent Running /agent\_id/8fe4d5d1-0093-4456-b7f8-027d6a3af079 /service\_id/1936f452-6b0f-427c-b68a-df7809138fe3  mysql\_slowlog\_agent Waiting /agent\_id/83a67171-e1df-4b3b-b5fa-10fee129a0c4 /service\_id/3f4b86f9-b437-4104-9a48-6eb7094cd47f  vmagent Starting push /agent\_id/f2834a31-dcb6-4b6f-a680-0db4cc9cb193  In Replica Server [ slave ] :-  ---------------------------------  Note :- Here Service-name = Should give hostname / any name of replica [ slave ] MariaDB server [ i.e where you are running pmm-admin command you should give the hostname of that server ]  [root@ip-172-31-16-154 ~]# hostname -I  172.31.16.154  [root@ip-172-31-16-154 ~]# pmm-admin add mysql --query-source=perfschema --username=pmm --password=pmm --service-name=mariadb\_replica\_server\_slave --host=172.31.16.154 --port=3306  MySQL Service added.  Service ID : /service\_id/4bbb6e97-2b12-4ef5-bb1d-264068726043  Service name: mariadb\_replica\_server\_slave  Table statistics collection enabled (the limit is 1000, the actual table count is 159).  [root@ip-172-31-16-154 ~]# pmm-admin add mysql --query-source=slowlog --username=pmm --password=pmm mariadb\_replica\_server\_slave\_slow\_sql  MySQL Service added.  Service ID : /service\_id/748b8452-5927-4a13-ac15-ed619f729d66  Service name: mariadb\_replica\_server\_slave\_slow\_sql  Table statistics collection enabled (the limit is 1000, the actual table count is 159).  [root@ip-172-31-16-154 ~]# pmm-admin list  Service type Service name Address and port Service ID  MySQL mariadb\_replica\_server\_slave 172.31.16.154:3306 /service\_id/4bbb6e97-2b12-4ef5-bb1d-264068726043  MySQL mariadb\_replica\_server\_slave\_slow\_sql 127.0.0.1:3306 /service\_id/748b8452-5927-4a13-ac15-ed619f729d66  Agent type Status Metrics Mode Agent ID Service ID  pmm\_agent Connected /agent\_id/f5bcc81b-129b-4b4c-ad0f-1ab304310b6e  node\_exporter Running push /agent\_id/215ffe75-e441-4c0e-8e9c-27296a0a5db7  mysqld\_exporter Running push /agent\_id/6ca44e43-fe91-4cd9-8a8d-97f08b1f73a7 /service\_id/748b8452-5927-4a13-a c15-ed619f729d66  mysqld\_exporter Running push /agent\_id/f19cb276-146e-4c8d-8f81-97cbefed3a91 /service\_id/4bbb6e97-2b12-4ef5-b b1d-264068726043  mysql\_perfschema\_agent Running /agent\_id/1d42cf29-8421-4caf-8487-63512c5ea4c0 /service\_id/4bbb6e97-2b12-4ef5-b b1d-264068726043  mysql\_slowlog\_agent Waiting /agent\_id/66871fbe-9f9f-497c-9ed8-fdb737f57275 /service\_id/748b8452-5927-4a13-a c15-ed619f729d66  vmagent Running push /agent\_id/4897e3ae-a238-4e79-8035-ae223f324fa8 |

**Status of pmm-admin for both servers [ Main and Replica ] Servers :-**

**---------------------------------------------------------------------**

|  |
| --- |
| [root@ip-172-31-22-44 ~]# hostname -I  172.31.22.44  [root@ip-172-31-22-44 ~]# pmm-admin status  Agent ID: /agent\_id/0f43c776-fd89-4f39-a419-b184cdc6a436  Node ID : /node\_id/66744072-1e39-4865-b34c-7577c668633c  PMM Server:  URL : https://44.196.179.230:443/  Version: 2.19.0  PMM Client:  Connected : true  Time drift : 369.518µs  Latency : 724.161µs  pmm-admin version: 2.19.0  pmm-agent version: 2.19.0  Agents:  /agent\_id/3841edbe-5bad-4622-a4f6-bedd0caeda79 mysqld\_exporter Running  /agent\_id/44fc15cb-f742-4883-9473-b2ca5c9f3fc5 mysqld\_exporter Running  /agent\_id/7a7f6d08-4902-4c91-b107-a5ec629fec9e node\_exporter Running  /agent\_id/83a67171-e1df-4b3b-b5fa-10fee129a0c4 mysql\_slowlog\_agent Waiting  /agent\_id/8fe4d5d1-0093-4456-b7f8-027d6a3af079 mysql\_perfschema\_agent Running  /agent\_id/f2834a31-dcb6-4b6f-a680-0db4cc9cb193 vmagent Running  [root@ip-172-31-22-44 ~]#  [root@ip-172-31-16-154 ~]# hostname -I  172.31.16.154  [root@ip-172-31-16-154 ~]# pmm-admin status  Agent ID: /agent\_id/31d09271-b426-465f-ab36-b4aaa4ff4a91  Node ID : /node\_id/20917476-aa47-4a9c-b06d-f0c01b336017  PMM Server:  URL : https://44.196.179.230:443/  Version: 2.19.0  PMM Client:  Connected : true  Time drift : 134.008µs  Latency : 515.208µs  pmm-admin version: 2.19.0  pmm-agent version: 2.19.0  Agents:  /agent\_id/0b3a5dda-0c5c-445e-85b2-79a127d9c296 vmagent Running  /agent\_id/0d5cf4e2-6903-4bf0-a3c1-1e761e01d29e mysqld\_exporter Running  /agent\_id/3a894355-f5d0-472d-9cd9-e0be2242c3c0 node\_exporter Running  /agent\_id/884e0e9b-765a-4be5-9749-f12aef64a1ed mysql\_slowlog\_agent Waiting  /agent\_id/b2f1cd7b-6df1-4686-af06-56bc71c799c4 mysql\_perfschema\_agent Running  /agent\_id/b582da1d-1df7-483d-864e-d0228a549048 mysqld\_exporter Running  [root@ip-172-31-16-154 ~]# |

**Login With PMM And screen shots :-**

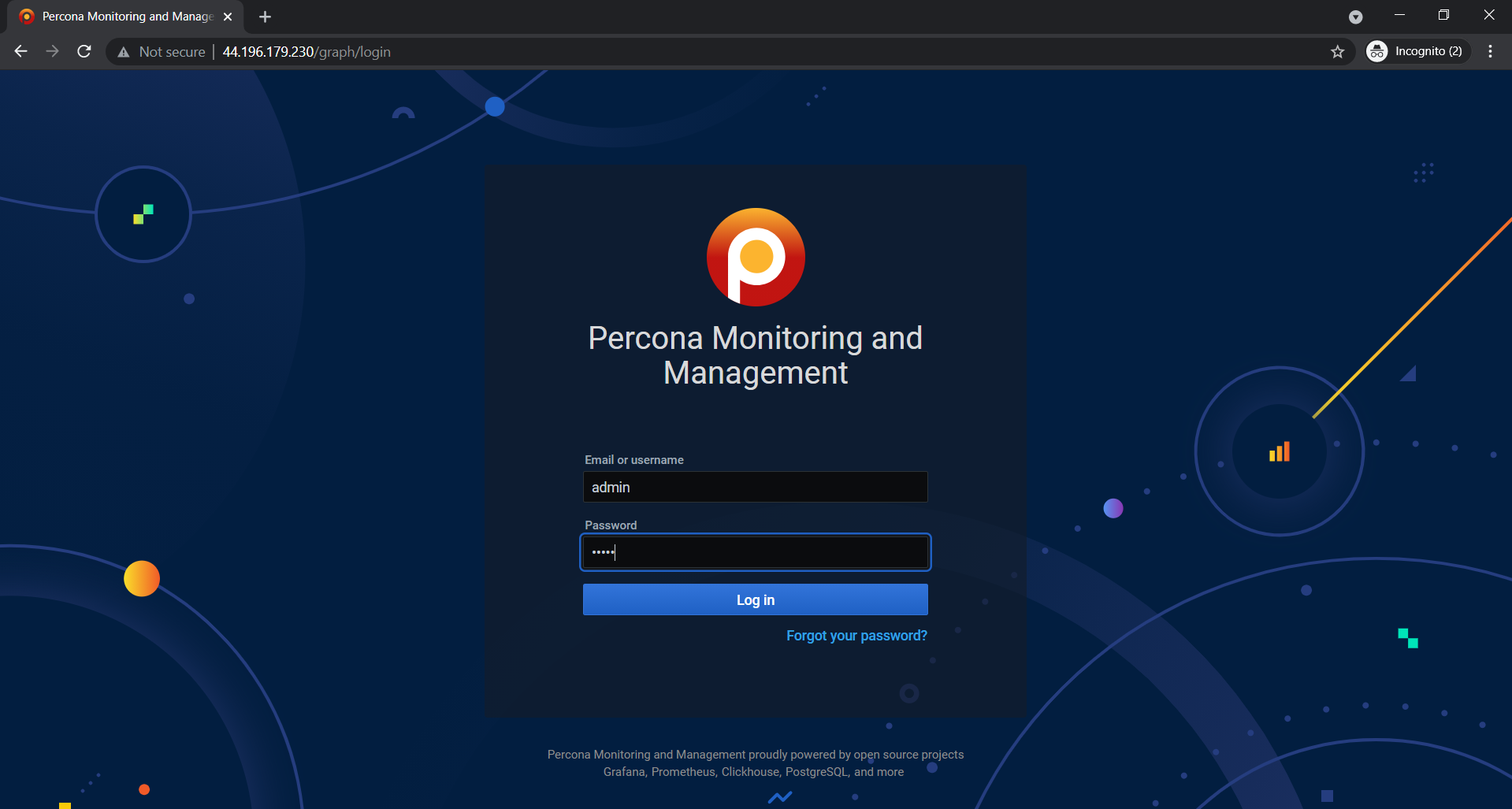
<https://44.196.179.230:443/>

Or

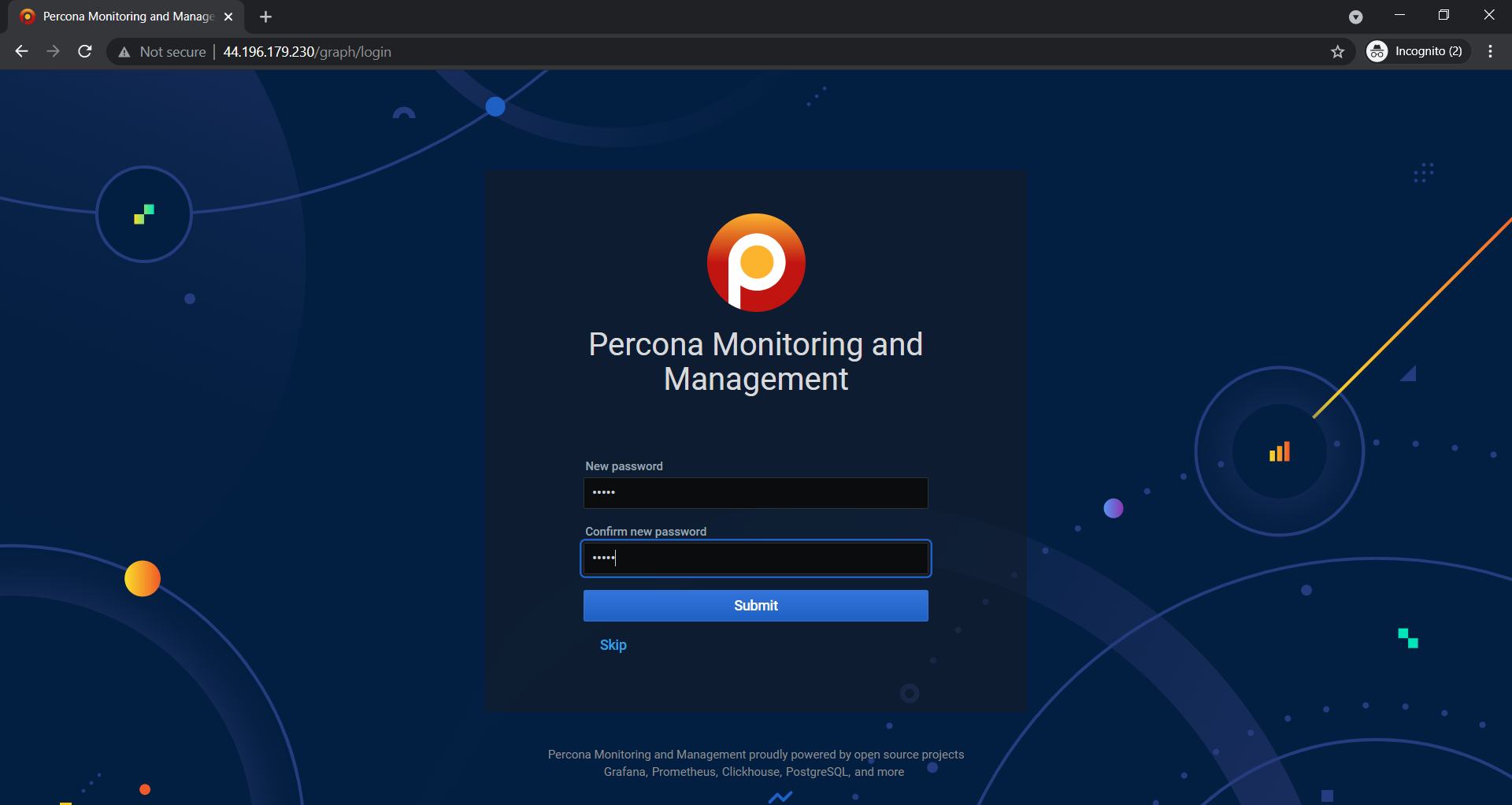
<http://44.196.179.230/>

This is my public IP Address of EC2 machine . If i give Private IP Address , it was not connecting .. so i given public IP Address and able to login

Login Credentials 🡺 admin / admin

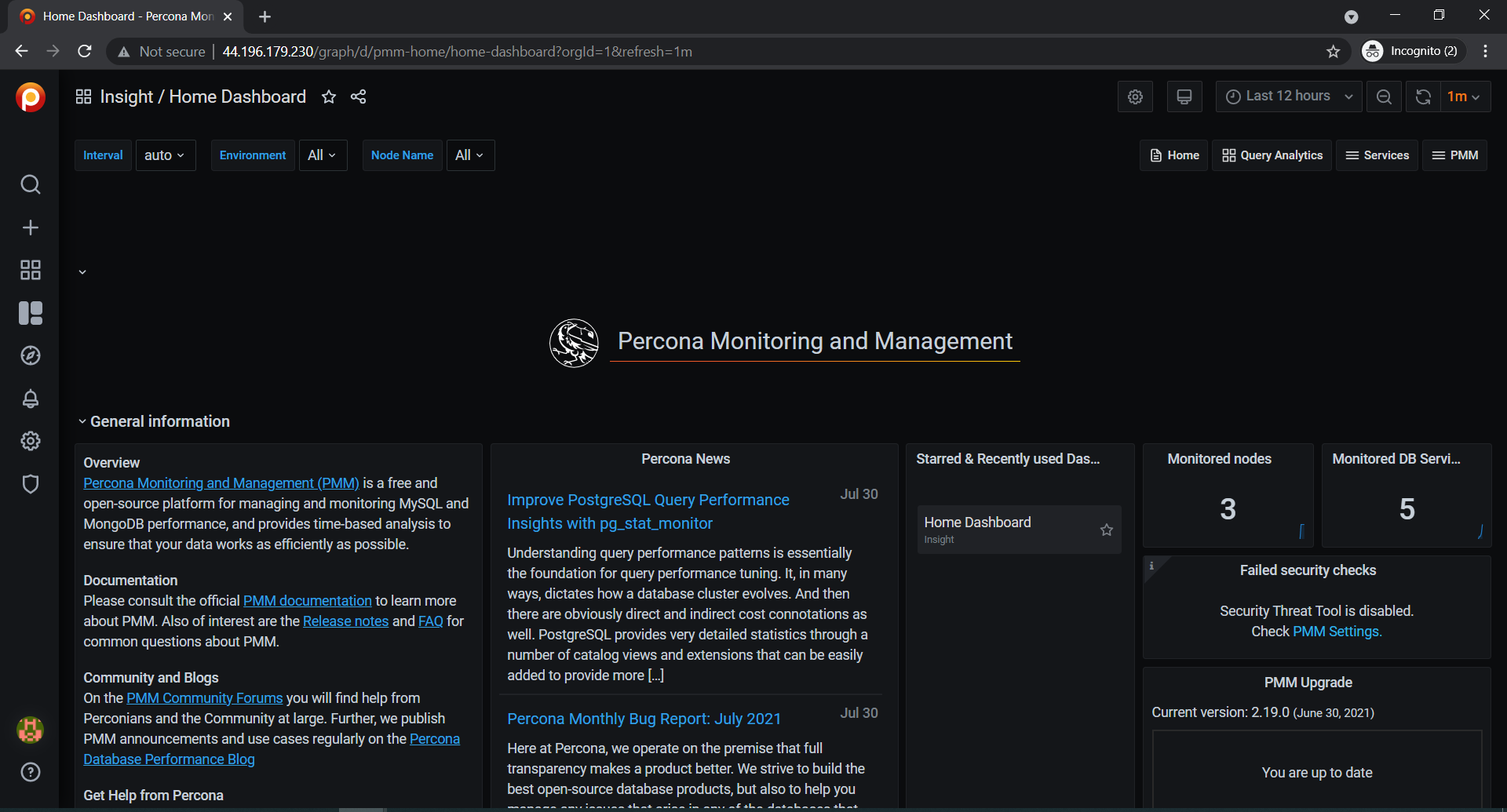


2nd Screen :-



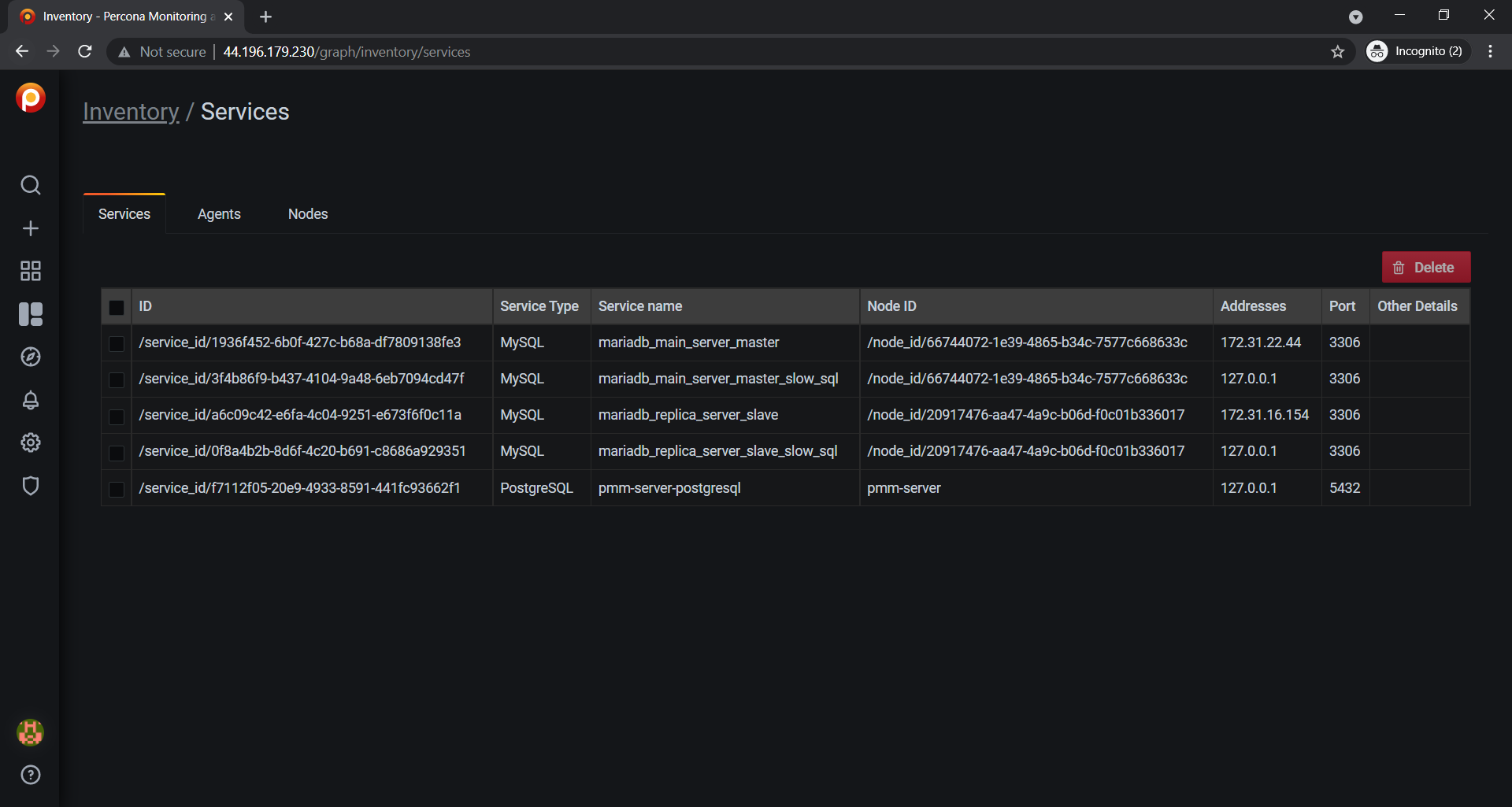
Here you can give same user name and password for conformation. i.e admin / admin

3rd Screen :-



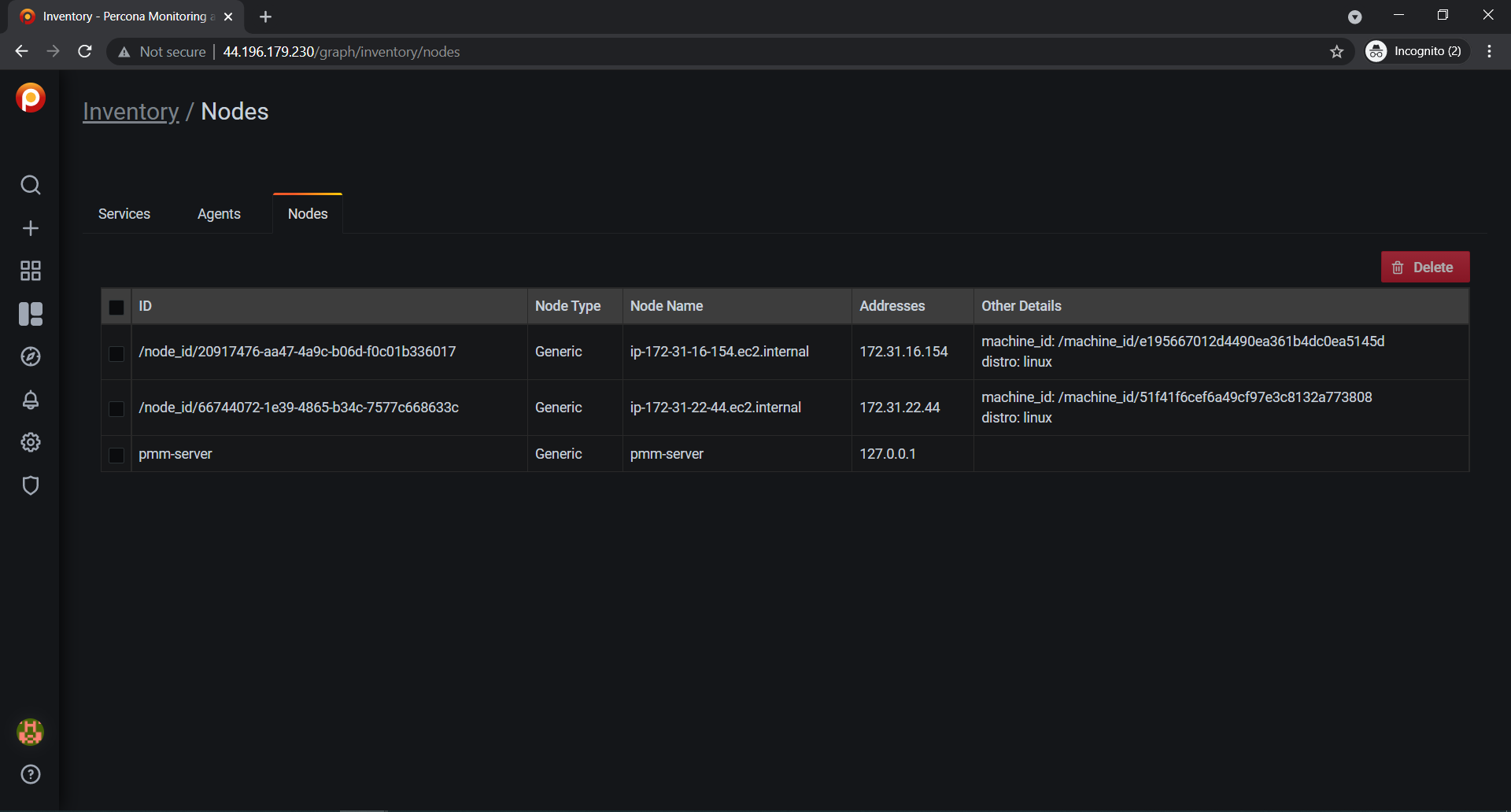
After added services , please login in to PMM tool and check the inventory of all services which we added manually through commands.

Click on Configuration 🡺 PMM Inventory 🡺 Inventory List 🡺 Services



Checking the Nodes :-

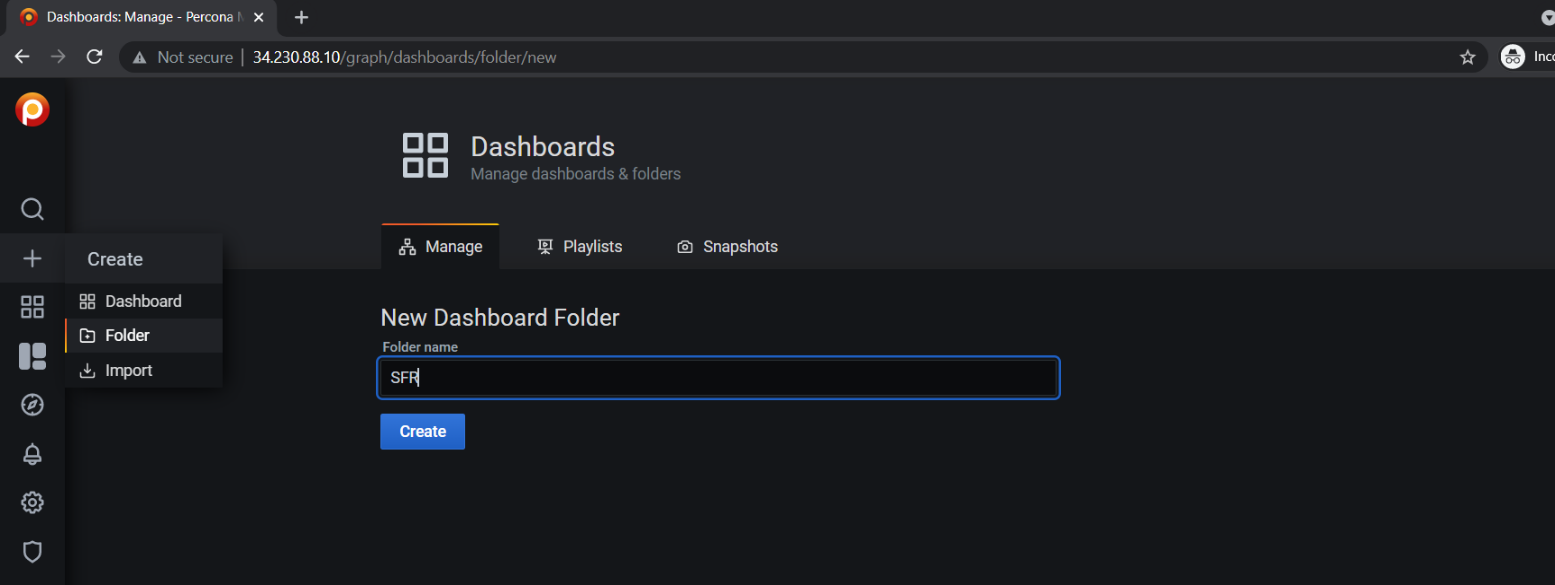
Click on Configuration 🡺 PMM Inventory 🡺 Inventory List 🡺 Nodes



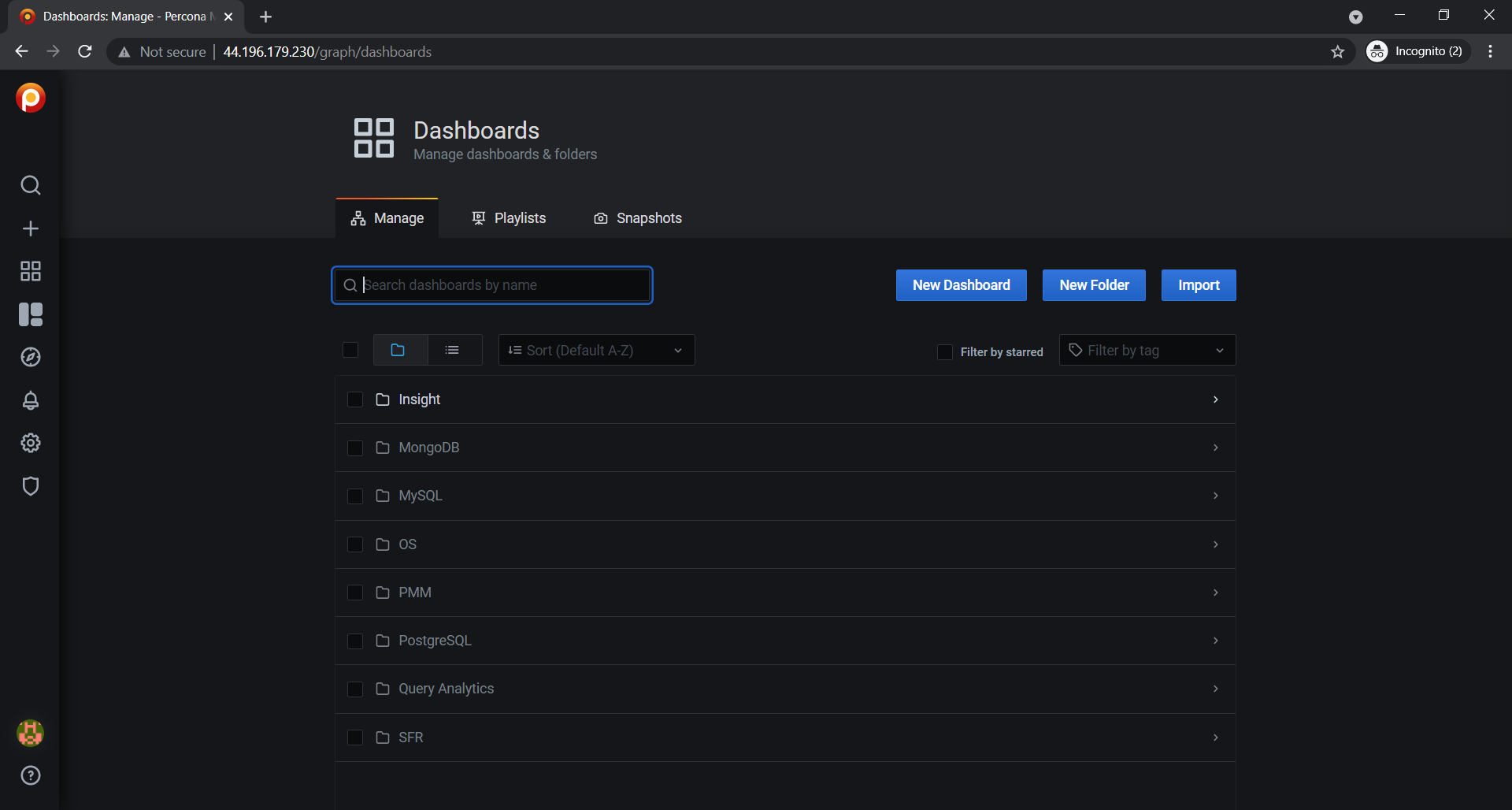
Create Folder for preparing th customized Dashboards , then wigets

---------------------------------------------------------------------

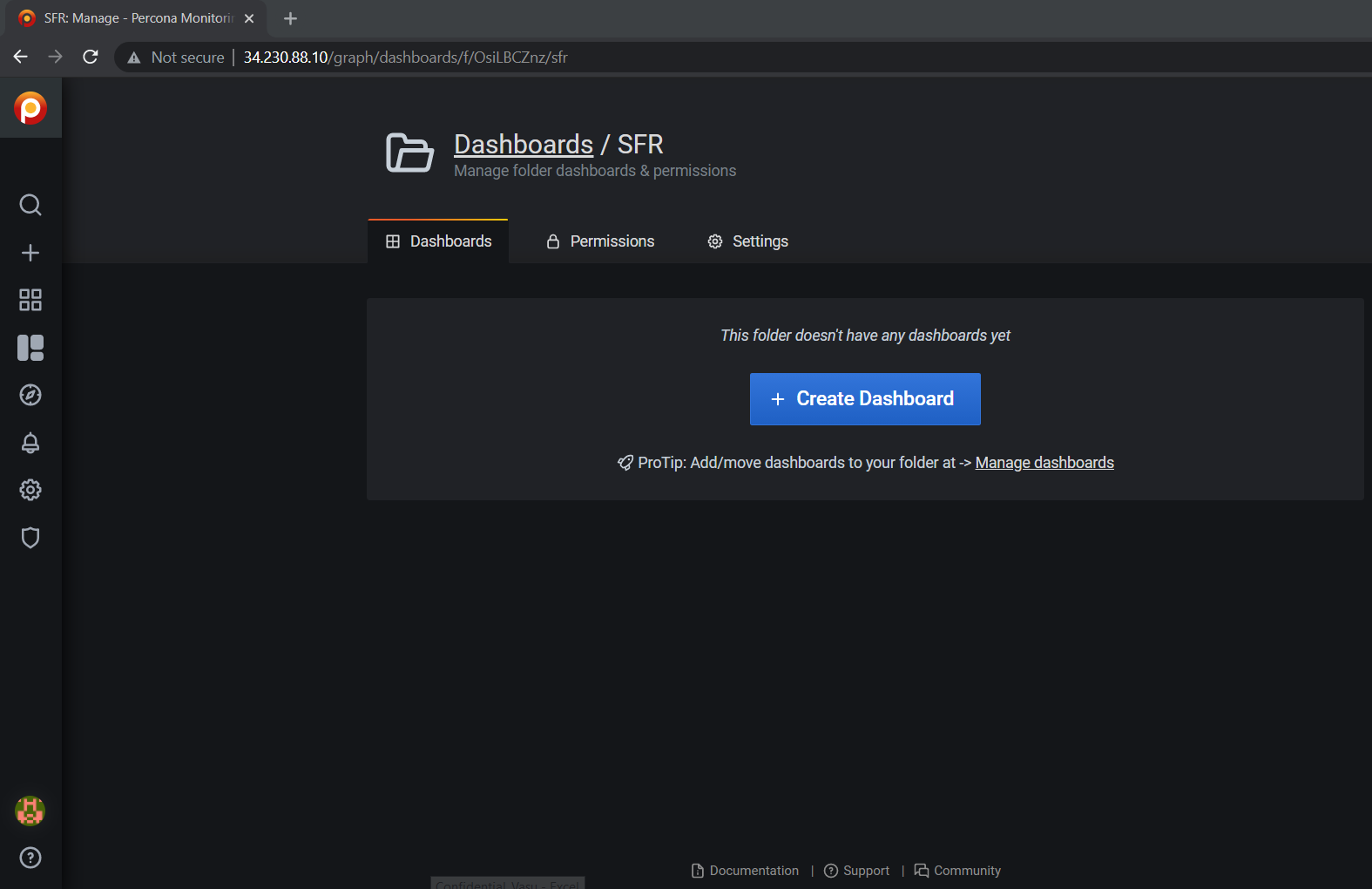
Here I am creating some name called ‘SFR’ in “ + “ symbol



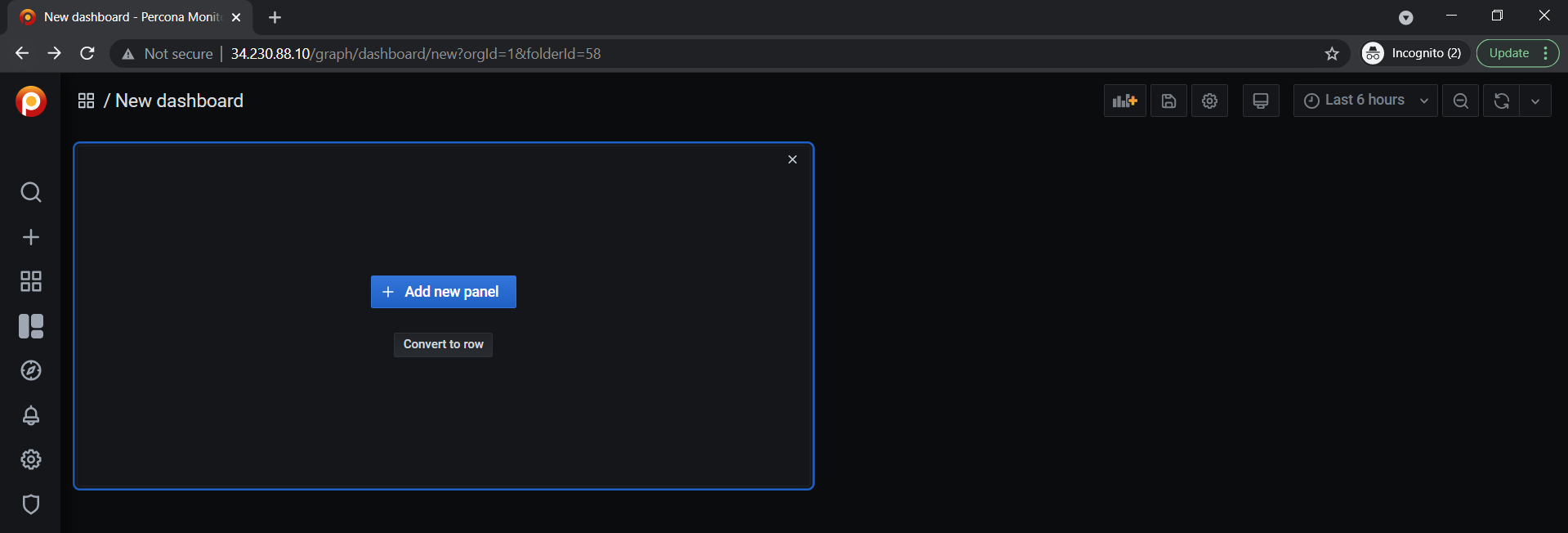
If we want to see created folder , we need to go to  symbol and click on Manage option. So I can see “SFR” Folder from below screen.



If you click on “SFR” folder , it will apper the below screen.

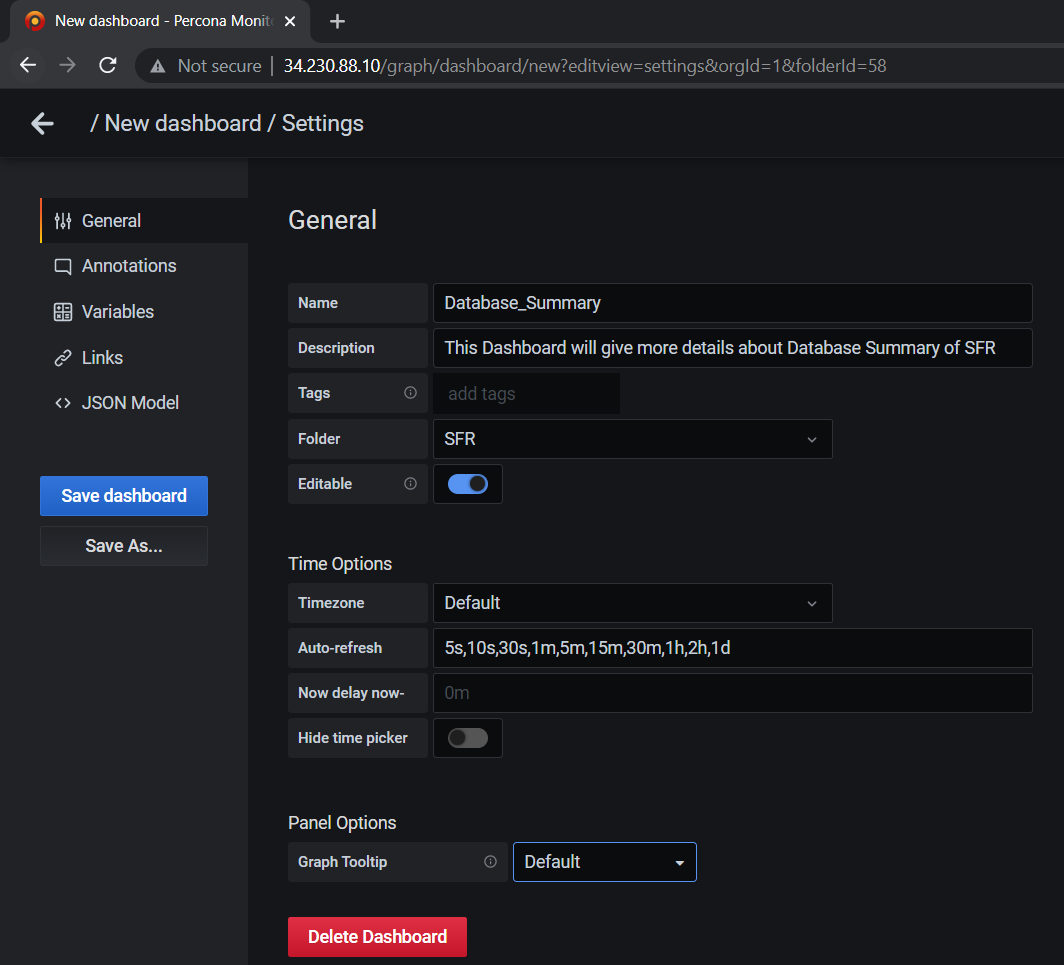


Once you click on “Create Dashboard” ,the below screen will be appear.



If you want to give Required Dashboard name , click on Setting option in top right side.

The below screen shot will give about Dashboard name and other information and click on “Save Dashboard” option .

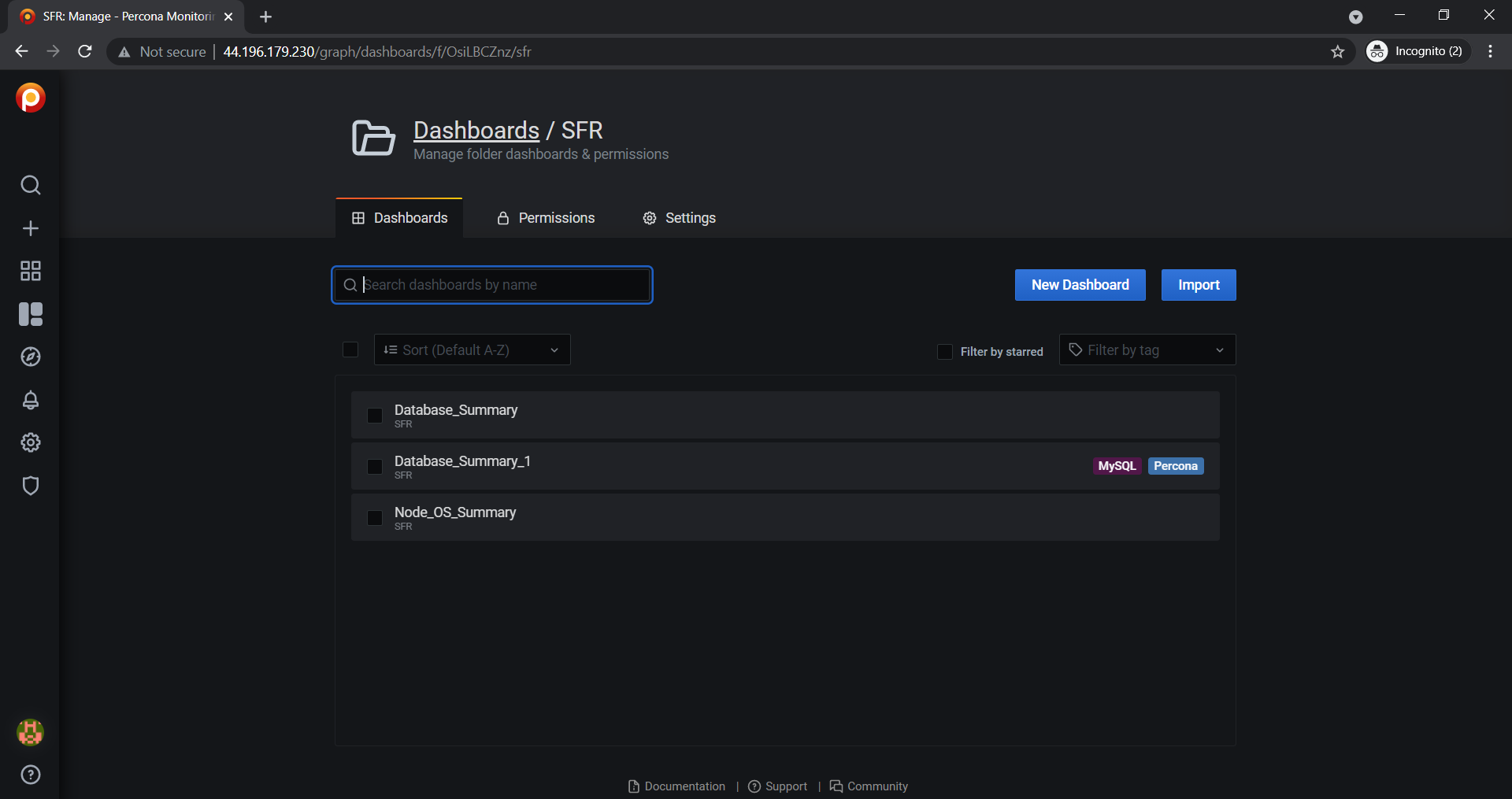


Now if I go “SFR” folder I can see 3 Dashboards which I created .

Database\_Summary

Node\_OS\_Summay

Databae\_Summary\_1



Checking some Metrices from DB side whether it’s enabled or not for PMM Setup.

|  |
| --- |
| MariaDB [(none)]> show variables like '%performance%';  +--------------------------------------------------------+-------+  | Variable\_name | Value |  +--------------------------------------------------------+-------+  | performance\_schema | ON |  | performance\_schema\_accounts\_size | 100 |  | performance\_schema\_digests\_size | 5000 |  | performance\_schema\_events\_stages\_history\_long\_size | 1000 |  | performance\_schema\_events\_stages\_history\_size | 20 |  | performance\_schema\_events\_statements\_history\_long\_size | 1000 |  | performance\_schema\_events\_statements\_history\_size | 20 |  | performance\_schema\_events\_waits\_history\_long\_size | 1000 |  | performance\_schema\_events\_waits\_history\_size | 20 |  | performance\_schema\_hosts\_size | 100 |  | performance\_schema\_max\_cond\_classes | 80 |  | performance\_schema\_max\_cond\_instances | 1500 |  | performance\_schema\_max\_digest\_length | 1024 |  | performance\_schema\_max\_file\_classes | 50 |  | performance\_schema\_max\_file\_handles | 32768 |  | performance\_schema\_max\_file\_instances | 2500 |  | performance\_schema\_max\_mutex\_classes | 200 |  | performance\_schema\_max\_mutex\_instances | 5858 |  | performance\_schema\_max\_rwlock\_classes | 40 |  | performance\_schema\_max\_rwlock\_instances | 3143 |  | performance\_schema\_max\_socket\_classes | 10 |  | performance\_schema\_max\_socket\_instances | 300 |  | performance\_schema\_max\_stage\_classes | 160 |  | performance\_schema\_max\_statement\_classes | 200 |  | performance\_schema\_max\_table\_handles | 2858 |  | performance\_schema\_max\_table\_instances | 667 |  | performance\_schema\_max\_thread\_classes | 50 |  | performance\_schema\_max\_thread\_instances | 358 |  | performance\_schema\_session\_connect\_attrs\_size | 512 |  | performance\_schema\_setup\_actors\_size | 100 |  | performance\_schema\_setup\_objects\_size | 100 |  | performance\_schema\_users\_size | 100 |  +--------------------------------------------------------+-------+  32 rows in set (0.001 sec)  MariaDB [(none)]> show variables like 'innodb\_monitor%';  +--------------------------+-------+  | Variable\_name | Value |  +--------------------------+-------+  | innodb\_monitor\_disable | |  | innodb\_monitor\_enable | all |  | innodb\_monitor\_reset | |  | innodb\_monitor\_reset\_all | |  +--------------------------+-------+  4 rows in set (0.001 sec)  MariaDB [(none)]> use performance\_schema;  Database changed  MariaDB [performance\_schema]> select \* from setup\_instruments;  +--------------------------------------------------------------------------  | NAME | ENABLED | TIMED |  +--------------------------------------------------------------------------  | wait/synch/mutex/sql/PAGE::lock | NO | NO |  | wait/synch/mutex/sql/TC\_LOG\_MMAP::LOCK\_sync | NO | NO |  | wait/synch/mutex/sql/TC\_LOG\_MMAP::LOCK\_active | NO | NO |  | wait/synch/mutex/sql/TC\_LOG\_MMAP::LOCK\_pool | NO | NO |  | wait/synch/mutex/sql/TC\_LOG\_MMAP::LOCK\_pending\_checkpoint | NO | NO |  | wait/synch/mutex/sql/LOCK\_des\_key\_file | NO | NO |  | wait/synch/mutex/sql/MYSQL\_BIN\_LOG::LOCK\_index | NO | NO |  | wait/synch/mutex/sql/MYSQL\_BIN\_LOG::LOCK\_xid\_list | NO | NO |  | wait/synch/mutex/sql/MYSQL\_BIN\_LOG::LOCK\_binlog\_background\_thread | NO | NO |  | wait/synch/mutex/sql/MYSQL\_BIN\_LOG::LOCK\_binlog\_end\_pos | NO | NO |  | wait/synch/mutex/sql/MYSQL\_RELAY\_LOG::LOCK\_index | NO | NO |  | wait/synch/mutex/sql/MYSQL\_RELAY\_LOG::LOCK\_binlog\_end\_pos | NO | NO |  | wait/synch/mutex/sql/Delayed\_insert::mutex | NO | NO |  | wait/synch/mutex/sql/hash\_filo::lock | NO | NO |  | wait/synch/mutex/sql/LOCK\_active\_mi | NO | NO |  | wait/synch/mutex/sql/LOCK\_connection\_count | NO | NO |  | wait/synch/mutex/sql/LOCK\_thread\_id | NO | NO |  | wait/synch/mutex/sql/LOCK\_crypt | NO | NO |  | wait/synch/mutex/sql/LOCK\_delayed\_create | NO | NO |  | wait/synch/mutex/sql/LOCK\_delayed\_insert | NO | NO |  | wait/synch/mutex/sql/LOCK\_delayed\_status | NO | NO |  | wait/synch/mutex/sql/LOCK\_error\_log | NO | NO |  | wait/synch/mutex/sql/LOCK\_gdl | NO | NO |  | wait/synch/mutex/sql/LOCK\_global\_system\_variables | NO | NO |  | wait/synch/mutex/sql/LOCK\_manager | NO | NO |  | wait/synch/mutex/sql/LOCK\_prepared\_stmt\_count | NO | NO |  | wait/synch/mutex/sql/LOCK\_rpl\_status | NO | NO |  | wait/synch/mutex/sql/LOCK\_server\_started | NO | NO |  | wait/synch/mutex/sql/LOCK\_status | NO | NO |  | wait/synch/mutex/sql/LOCK\_show\_status | NO | NO |  | wait/synch/mutex/sql/LOCK\_system\_variables\_hash | NO | NO |  | wait/synch/mutex/sql/LOCK\_stats | NO | NO |  | wait/synch/mutex/sql/LOCK\_global\_user\_client\_stats | NO | NO |  | wait/synch/mutex/sql/LOCK\_global\_table\_stats | NO | NO |  | wait/synch/mutex/sql/LOCK\_global\_index\_stats | NO | NO |  | wait/synch/mutex/sql/THD::LOCK\_wakeup\_ready | NO | NO |  | wait/synch/mutex/sql/wait\_for\_commit::LOCK\_wait\_commit | NO | NO |  | wait/synch/mutex/sql/gtid\_waiting::LOCK\_gtid\_waiting | NO | NO |  | wait/io/file/innodb/innodb\_data\_file | YES | YES |  |  ….  …  +--------------------------------------------------------------------------  706 rows in set (0.001 sec)  MariaDB [performance\_schema]> select count(1) from setup\_instruments;  +----------+  | count(1) |  +----------+  | 706 |  +----------+  1 row in set (0.000 sec)  MariaDB [performance\_schema]> select count(1) from setup\_consumers;  +----------+  | count(1) |  +----------+  | 12 |  +----------+  1 row in set (0.000 sec)  MariaDB [performance\_schema]> select \* from setup\_consumers;  +--------------------------------+---------+  | NAME | ENABLED |  +--------------------------------+---------+  | events\_stages\_current | NO |  | events\_stages\_history | NO |  | events\_stages\_history\_long | NO |  | events\_statements\_current | YES |  | events\_statements\_history | NO |  | events\_statements\_history\_long | NO |  | events\_waits\_current | NO |  | events\_waits\_history | NO |  | events\_waits\_history\_long | NO |  | global\_instrumentation | YES |  | thread\_instrumentation | YES |  | statements\_digest | YES |  +--------------------------------+---------+  12 rows in set (0.000 sec)  MariaDB [performance\_schema]> show variables like 'slow\_query%';  +---------------------+--------------------------+  | Variable\_name | Value |  +---------------------+--------------------------+  | slow\_query\_log | OFF | ==🡺 Should be ON  | slow\_query\_log\_file | ip-172-31-22-44-slow.log |  +---------------------+--------------------------+  2 rows in set (0.001 sec)  MariaDB [performance\_schema]> show variables like 'log\_output%';  +---------------+-------+  | Variable\_name | Value |  +---------------+-------+  | log\_output | FILE |  +---------------+-------+  1 row in set (0.001 sec) |

**PMM Docker connection Commands :-**

|  |
| --- |
| In PMM Server :-  ------------------  [root@ip-172-31-17-0 ~]# docker ps -a  CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES  440e11f9237e percona/pmm-server:2 "/opt/entrypoint.sh" 5 days ago Up About an hour (healthy) 0.0.0.0:80->80/tcp, 0.0.0.0:443->443/tcp pmm-server  1f3c4b2703d1 percona/pmm-server:2 "/bin/true" 5 days ago Created pmm-data  [root@ip-172-31-17-0 ~]# docker exec -it pmm-server /bin/bash  [root@440e11f9237e opt]#  [root@440e11f9237e opt]# cd  [root@440e11f9237e ~]# clickhouse  Use one of the following commands:  clickhouse local [args]  clickhouse client [args]  clickhouse benchmark [args]  clickhouse server [args]  clickhouse performance-test [args]  clickhouse extract-from-config [args]  clickhouse compressor [args]  clickhouse format [args]  clickhouse copier [args]  clickhouse obfuscator [args]  [root@440e11f9237e ~]# clickhouse local  [root@440e11f9237e ~]# df -h  Filesystem Size Used Avail Use% Mounted on  overlay 25G 4.1G 21G 17% /  tmpfs 64M 0 64M 0% /dev  tmpfs 2.0G 0 2.0G 0% /sys/fs/cgroup  shm 64M 16K 64M 1% /dev/shm  /dev/xvda1 25G 4.1G 21G 17% /srv  tmpfs 2.0G 0 2.0G 0% /proc/acpi  tmpfs 2.0G 0 2.0G 0% /proc/scsi  tmpfs 2.0G 0 2.0G 0% /sys/firmware  [root@440e11f9237e ~]# cd /var/lib/  [root@440e11f9237e lib]# ls -ltr  drwxr-xr-x 2 root root 6 Apr 11 2018 rpm-state  drwxr-xr-x 2 root root 6 Apr 11 2018 misc  drwxr-xr-x 2 root root 6 Apr 11 2018 games  drwxr-xr-x 2 nobody nobody 6 Sep 25 2020 prometheus  drwxr-xr-x 2 root root 6 Sep 30 2020 dbus  drwxr-xr-x 2 root root 6 Sep 30 2020 initramfs  drwx------ 2 root root 6 Nov 13 2020 machines  drwxr-xr-x 1 root root 4096 Nov 13 2020 rpm  drwxr-xr-x 1 root root 40 Feb 2 16:34 systemd  drwxr-xr-x 2 nobody nobody 6 May 17 08:25 alertmanager  drwx------ 3 postgres postgres 37 Jun 30 11:40 pgsql  drwxr-xr-x 1 root root 4096 Jun 30 11:41 alternatives  drwxr-xr-x 3 root root 21 Jun 30 11:41 cloud  drwx------ 2 clickhouse clickhouse 6 Jun 30 11:42 clickhouse  drwxr-xr-x 3 grafana grafana 21 Jun 30 11:42 grafana  drwxr-xr-x 1 root root 68 Jun 30 11:43 yum  drwxr-xr-x 1 root root 30 Aug 3 13:17 logrotate  [root@440e11f9237e lib]# cd clickhouse/  [root@440e11f9237e clickhouse]# ls -ltr  total 0  [root@440e11f9237e clickhouse]# cd  [root@440e11f9237e ~]# |

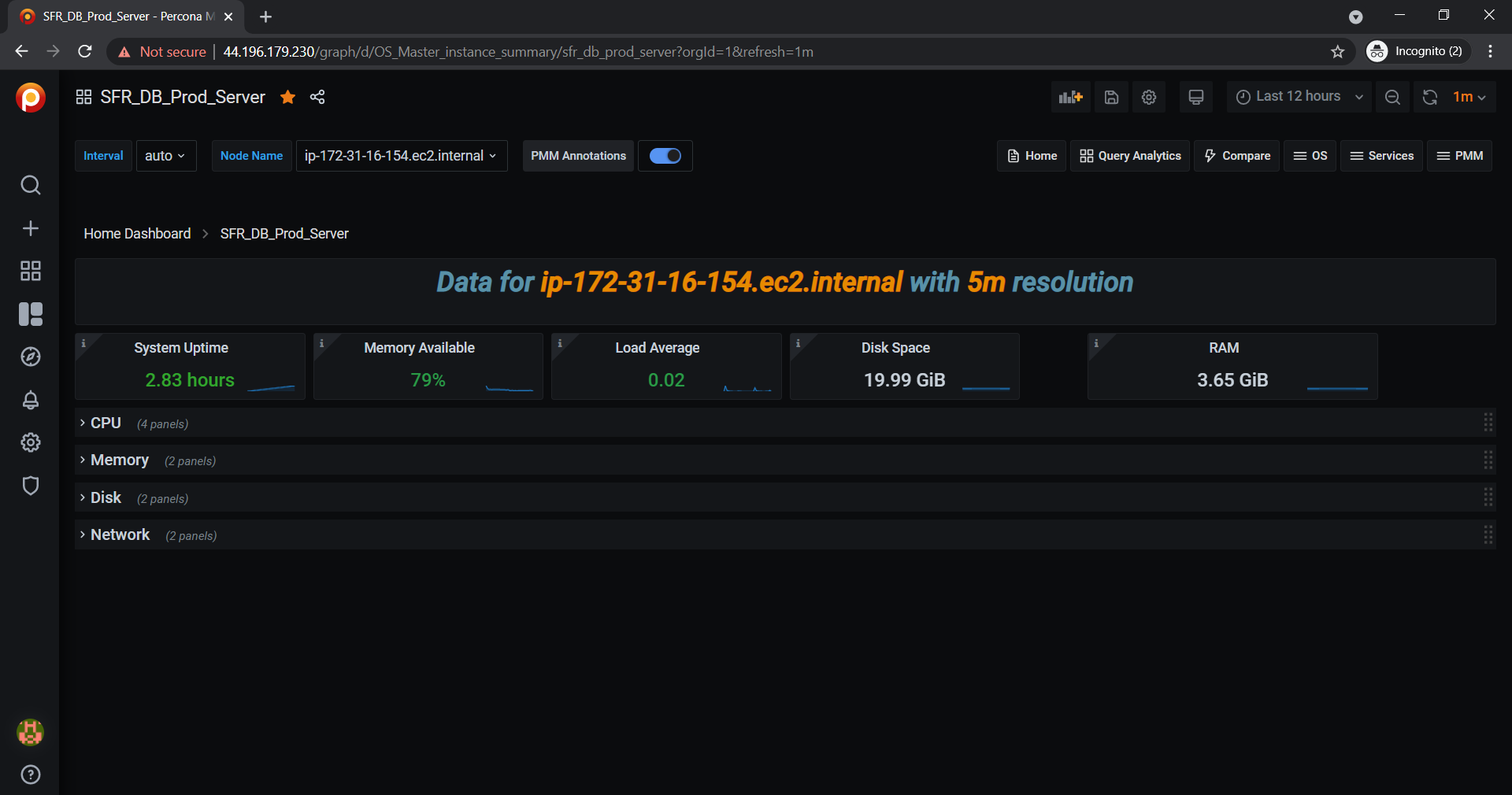
I have created the below names for Customize Dashboards .

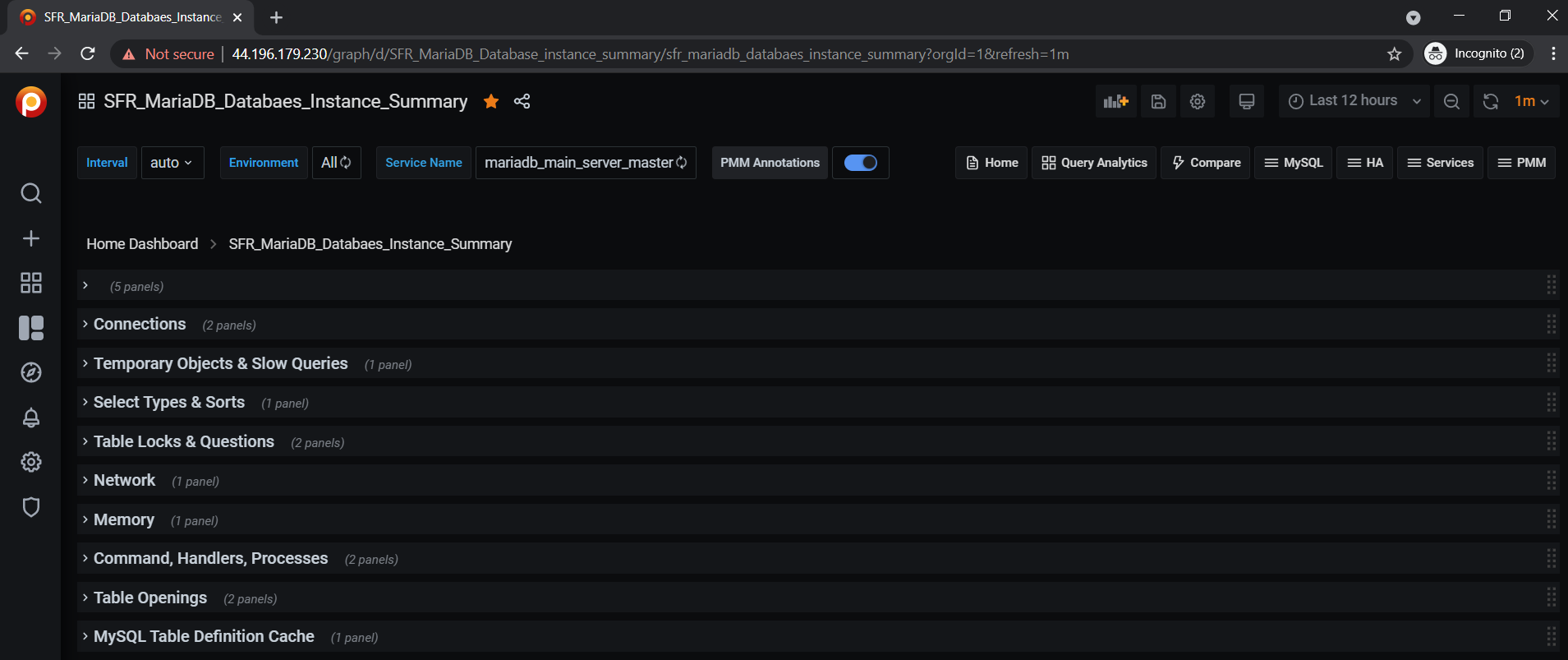
1. SFR\_DB\_Prod\_Server [ Which is belongs to OS Metrices ]

* CPU
* Memory
* Disk
* Network

1. SFR\_MariaDB\_Database\_Instance\_Summary [ Which is belongs to DB Matrices ]

* Connections
* Temporary Objects & Slow Queries
* Select Types & Sorts
* Table Locks & Questions
* Network
* Memory
* Command ,Handlers ,Processes
* Table Openings
* MySQL Table Defination Cache





--- Database Summary ---

MySQL Questions

Temporary Objects

Table Open Cache

Table Definition cache

------- InnoDB --------

Innodb Transactions

Innodb Log IO

Innodb Bufferpool data

Innodb Check point Age

Innodb Log file usage

Transaction History

Innodb AHI usage

Innodb Contention OS waits

----- MySQL summary -----

MySQL client thread activity

Top command Counters

Now let’s create a repeated row:

<https://grafana.com/blog/2020/06/09/learn-grafana-how-to-automatically-repeat-rows-and-panels-in-dynamic-dashboards/>

--> Click Add panel, and then click Convert to row. The panels you created earlier are automatically assigned to the row you created.

--> Hover your cursor over the Row title and click the gear icon to open the Row Options.

--> In Title, enter $service.

--> In Repeat for, select the variable you want to repeat rows for. For this example, select service.

--> Click Update.

--> Select multiple services from the service drop-down menu. Grafana creates a row for each selected service, each within its own set of repeated panels.

--> Find the left-most panel in the top-most row and edit it.

--> In the text area for the Text panel, enter $instance and $service.

--> Save the dashboard and refresh the page.