

MongoDB Installation

Introduction

The Objective of this document is to describe the procedure for MongoDB installation.

Document Version History

Ver. #	Ver. Date	Description	Author	Reviewed By	Approved By
1.0	6 th Jan 2023	MongoDB Installation	Rahul Kanaujia	Romesh Gupta	Romesh Gupta

Document Reviewers & Approvers

Document Approvers		
Name	Role	Date of sign off
Romesh Gupta	Project Manager	6 th Jan 2023

This tutorial describes MongoDB 4.4 Community Edition installation on Red hat Linux.

1. Configure the package management system: (yum).

Create the file as follow:

```
Vi /etc/yum.repos.d/mongodb-org-4.4.repo:
```

Download the RPM packages from below link or else copy and paste the rpm url in the above created file as follow.

```
Vi /etc/yum.repos.d/mongodb-org-4.4.repo
```

```
[mongodb-org-4.4]
```

```
name=MongoDB Repository
```

```
baseurl=https://repo.mongodb.org/yum/redhat/$releasever/mongodb-org/4.4/x86_64/
```

```
gpgcheck=1
```

```
enabled=1
```

```
gpgkey=https://www.mongodb.org/static/pgp/server-4.4.asc
```

2. Install the MongoDB packages:

To install the latest stable version of MongoDB, issue the following command:

```
sudo yum install -y mongodb-org
```



```
[dnyce@linuxshelltips ~]$ sudo dnf install mongodb-org -y
Updating Subscription Management repositories.
Last metadata expiration check: 0:08:12 ago on Wed 19 Jan 2022 04:43:55 PM EAT.
Dependencies resolved.
=====
Package                                Arch    Version      Repository    Size
=====
Installing:
mongodb-org                            x86_64    5.0.4-1.el8   mongodb-org-5.0    11 k
Installing dependencies:
mongodb-database-tools                 x86_64    100.5.1-1     mongodb-org-5.0    47 M
mongodb-mongosh                        x86_64    1.1.9-1.el7   mongodb-org-5.0    44 M
mongodb-org-database                   x86_64    5.0.4-1.el8   mongodb-org-5.0    11 k
mongodb-org-database-tools-extra       x86_64    5.0.4-1.el8   mongodb-org-5.0    16 k
mongodb-org-mongos                     x86_64    5.0.5-1.el8   mongodb-org-5.0    19 M
mongodb-org-server                     x86_64    5.0.5-1.el8   mongodb-org-5.0    28 M
mongodb-org-shell                       x86_64    5.0.4-1.el8   mongodb-org-5.0    15 M
mongodb-org-tools                       x86_64    5.0.4-1.el8   mongodb-org-5.0    11 k
=====
Transaction Summary
=====
Install 9 Packages
Total download size: 153 M
```

3. Create the MongoDB data and Log directories:

```
sudo mkdir -p /var/lib/mongo
```

```
sudo mkdir -p /var/log/mongodb
```

4. Change the owner to Mongod:

```
sudo chown -R mongod:mongod /var/lib/mongo
```

```
sudo chown -R mongod:mongod /var/log/mongodb
```



5. Configure mongod.conf file accordingly with minimum options.

E.g.

```
#Process Options
processManagement:
  fork: true
net:
  bindIp: 10.180.19.65
  port: 37017

security:
  enableEncryption: true
  encryptionKeyFile: /MongoData/keyfile/mongodb-keyfile

##The Federal Information Processing Standard (FIPS) is a com
ly. You can configure MongoDB to run with a FIPS 140-2 certif
net:
  tls:
    FIPSMODE: true

#Enables MongoDB Enterprise Features
security:
  authorization: "enabled"
  keyFile: /MongoData/keyfile/key
  transitionToAuth: true

#Specifies storage engine
storage:
  journal:
    enabled: true
  dbPath: /MongoData/db_test
  engine: wiredTiger

#Speicifies systemLog output
systemLog:
  destination: file
  path: /MongoLog/test.log
  logAppend: true
  logRotate: reopen
~
```

6. To start the Mongod service use command:

```
systemctl start mongod
```

7. To login to the MongoDB shell use following command:

```
mongo/ mongosh
```



```
[tecmint@Ubuntu20:~]$ mongo
MongoDB shell version v4.4.0
connecting to: mongodb://127.0.0.1:27017/?compressors=disabled&gssapiServiceName=mongodb
Implicit session: session { "id" : UUID("82e8c2de-e416-442b-aec4-24ef4fb452cc") }
MongoDB server version: 4.4.0
Welcome to the MongoDB shell.
For interactive help, type 'help'.
For more comprehensive documentation, see
  https://docs.mongodb.com/
Questions? Try the MongoDB Developer Community Forums
  https://community.mongodb.com
---
The server generated these startup warnings when booting:
  2020-09-08T07:15:07.370+00:00: Using the XFS filesystem is strongly recommended with the WiredTiger storage engine. See http://dochub.mongodb.org/core/prodnotes-filesystem
  2020-09-08T07:15:12.944+00:00: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted
---
---
  Enable MongoDB's free cloud-based monitoring service, which will then receive and display metrics about your deployment (disk utilization, CPU, operation statistics, etc).

  The monitoring data will be available on a MongoDB website with a unique URL accessible to you and anyone you share the URL with. MongoDB may use this information to make product improvements and to suggest MongoDB products and deployment options to you.

  To enable free monitoring, run the following command: db.enableFreeMonitoring()
  To permanently disable this reminder, run the following command: db.disableFreeMonitoring()
---
>
```

8. To see the default databases, fire a command “show dbs” which results as:

>Admin

>Local

>config

```
> show dbs
admin    0.000GB
base1    0.000GB
config   0.000GB
local    0.000GB
test     0.000GB
>
```

MongoDB basic Hardening after installation:

Change below parameter values/path.

1. Default port number i.e. 27017
2. Default data directory i.e. /var/lib/mongo
3. Ulimit for mongod service
4. Setup secure authentication for client login
5. Change log directory : /var/log/mongodb (default)
6. Implement basic hardening points on mongodb server using CIS Document.

Please find below URL for installation of MongoDB server from official website.

[Install MongoDB Community Edition on Red Hat or CentOS — MongoDB Manual](#)

Post installation of database we will configure monitoring.

Please find below doc for the same.

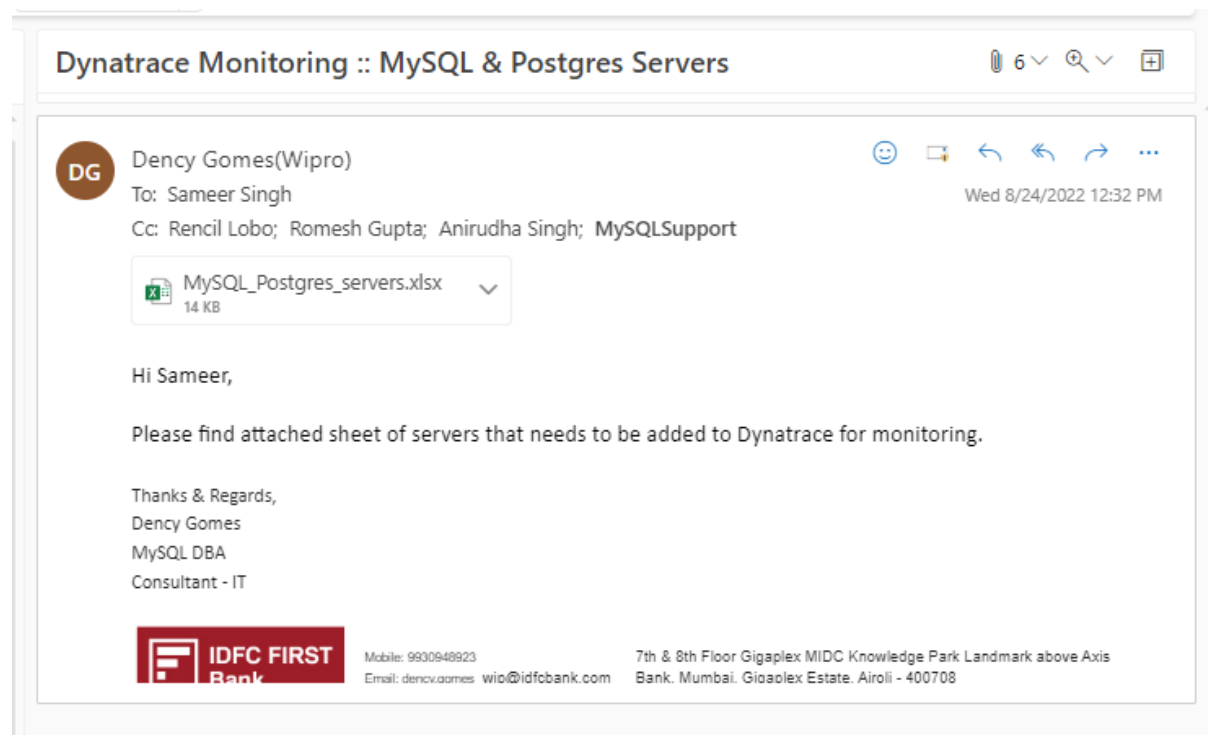
STEPS TO CONFIGURE ANY SERVER UNDER MONITORING TOOL

In order to integrate/configure any server under monitoring tools like Dynatrace, Prometheus

etc. we follow below mentioned steps.

1. First, we email the monitoring team to integrate/configure servers into monitoring tool. In this email we give them the list of servers which is to be integrated for monitoring. This email is sent to the email's ids mentioned below:
 - Dynatrace APM support- oneapmsupport@idfcfirstbank.com
 - Sameer Singh - sameer.singh@idfcfirstbank.com
 - Uday Luhar- uday.luhar@idfcfirstbank.com
 - Sandeep MV- sandeep.mv@idfcfirstbank.com

PFB Screenshot for reference



2. Post this, we create one user on all the servers from the list with read only (select) privileges.

For e.g.

```
CREATE USER 'promora'@'10.180.10.139' IDENTIFIED BY 'promo@123';
```

```
GRANT SELECT ON *. * TO 'READ_ONLY_promora'@'10.180.10.139';
```

```
FLUSH PRIVILEGES;
```

3. Then monitoring team works on Creating the DB user and Port opening. Post that they install the exporter and take it ahead with Dashboard creation from their end.
4. Once dashboard creation gets done, we provide list of users who needs access to the dashboard and what are the mail ids/distros that needs to be configured for the alert mechanism.
5. Once users get the access, they will provide the URL to dashboard to monitor the servers which we provided. PFB SS



Uday Luhar



To: Dency Gomes(Wipro); keval senhgani(Quality Kiosk Technologies Pvt. Ltd) +1 other Thu 9/22/2022 12:36 PM
Cc: Romesh Gupta; Anirudha Singh; Sameer Singh; Rahul Kanaujia +7 others

Hi Team,

The dashboard creation of below DBs are complete. Below is the dashboard URL and also provide the list of user who needs access to the dashboard and what are the mail ids/distros that needs to be configured for the alert mechanism.

<https://monit.devops.idfcbank.com/d/000000040/prometheus-postgres-exporter?orgId=1>

@keval senhgani(Quality Kiosk Technologies Pvt. Ltd) please take this priority in getting the access once we receive the user list.

@Yogesh Agrawal Please configure the alerting once we have the distro list for alerting.

Thanks & regards

Uday Luhar

Engineering Manager

Information Technology

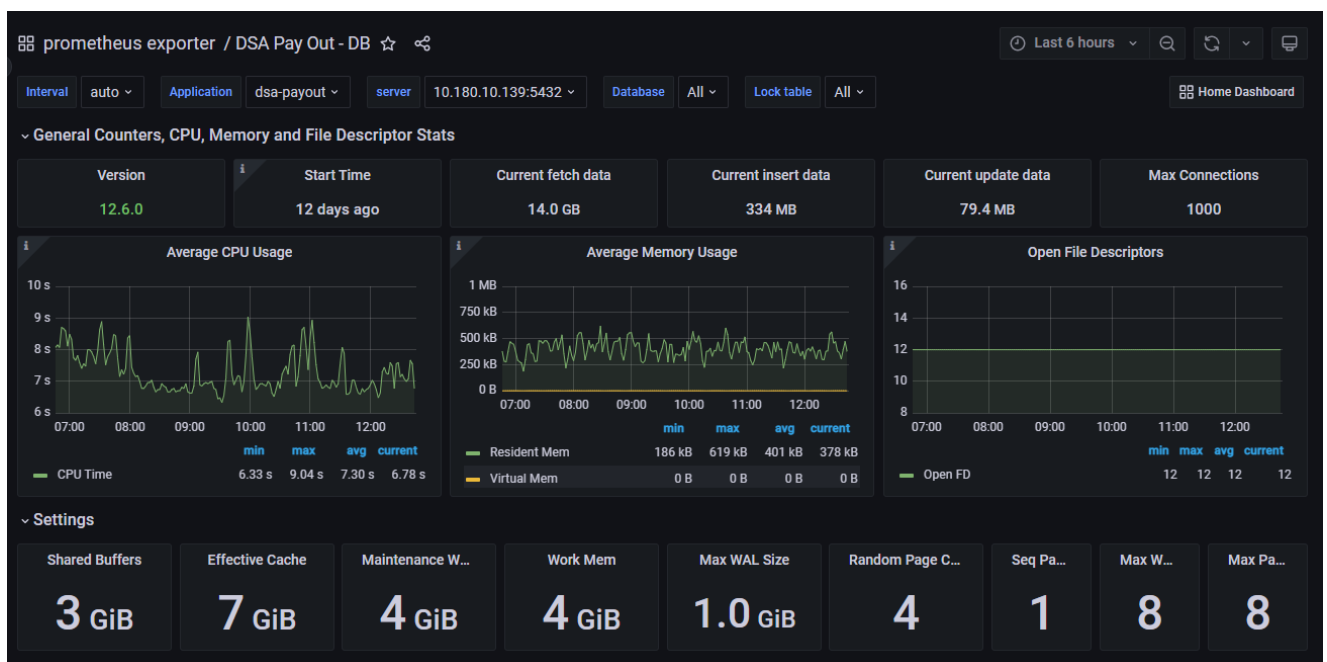
Cell +91-9845902244

6. We can then monitor the server through the tool.

e.g., Prometheus Tool

IP: 10.180.10.139

APP: DSA Payouts Automation





IP: 10.180.22.134

APP: Optimus-Hydra

