MongoDB management software for enterprises

System Integration document

Version 3.6.1.0

1. Monitoring server

1.1. Establish Linux Service Account

This is the preceding procedure of section 2.2 SSH public key authentication.

When the monitoring server runs on Linux OS, a Linux service account (e.g. gudab) is required exculsively for Gudab software.　。

All the monitoring servers require to establish the same Service Account due to Gudab's SSH public key authentication adapts on one account

```
$ sudo useradd gudab
$ sudo passwd gudab
```

1.2. Establish MongoDB Service Account

The monitoring object (MongoDB instances) require establishing a MongoDB service account (e.g. root) in the admin database so they can be added to gudab's monitoring server's list
  All the members in the shard cluster need to set the same service accont due to Auto Discovery adapts on one account.

```
> use admin
> db.createUser(
   {
       user:"root",
       pwd:"gudab",
       roles:["root"]
   }
)
```

Note : Please authorize the account with root role to gain full operation access.

1.3. Edit hosts file

Confirm Gudab's IP corresponds to its hostname. Non-correspondence will affect the full backup function.

- Windows：C:\Windows\System32\drivers\etc\hosts
- Linux：/etc/hosts

```
  GNU nano 2.3.1                                    File: /etc/hosts

127.0.0.1    localhost localhost.localdomain localhost4 localhost4.localdomain4
::1          localhost localhost.localdomain localhost6 localhost6.localdomain6
192.168.1.121 server1
192.168.1.122 server2
192.168.1.123 server3
192.168.1.64  gudabSvr
```

1-3 hosts file (for Linux)

Method of Inspection

```
[root@server1 ~]$ ping gudabSvr
PING gudabSvr (192.168.1.64) 56(84) bytes of data.
64 bytes from gudabSvr (192.168.1.64): icmp_seq=1 ttl=128 time=0.920 ms
```
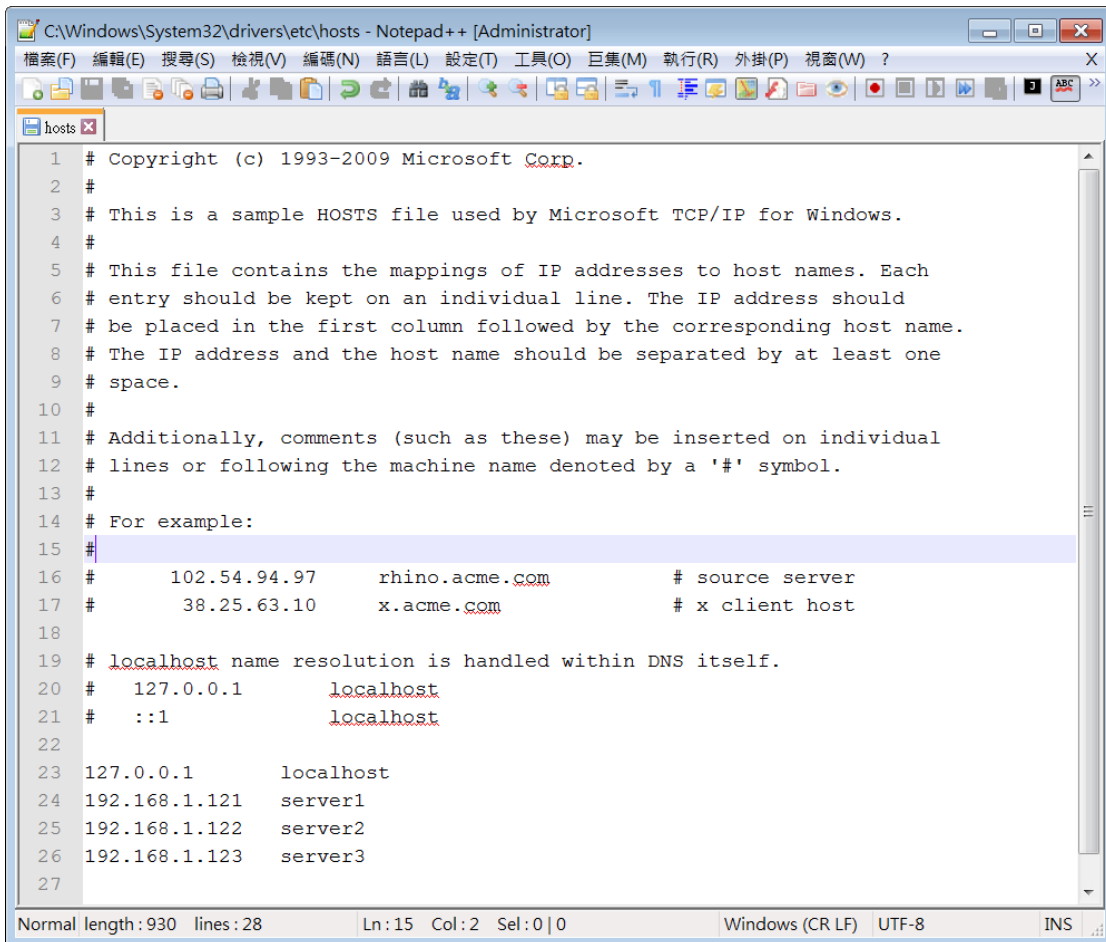
Note: Hosts file doesn't need editing if there is corresponded DNS.

2. gudab

2.1. Edit hosts file

Make sure the monitoring server's IP corresponds to its hostname. Disimilarity may disable servers to be monitored by Gudab.

- Windows：C:\Windows\System32\drivers\etc\hosts
- Linux：/etc/hosts

2-1 hosts file (for Windows)

Method of inspection (for Windows)

C:\> ping server1
Ping server1 [192.168.1.121] (use of 32 bit data):
Reply from 192.168.1.121: bit=32 time<1ms TTL=64

Note: Hosts file doesn't need editing if there is corresponded DNS.

2.2. SSH public key Authentication、edit SSH properties file

● SSH setting

Authorize public key via SSH; add gudab's public key (id_rsa.pub)to the authorized
monitoring list in order to enable remote login without password and collect host status
metrics (CPU, Memory, Storage, Swap)

Execute commend at Gudab's host:

1. Generate public or private key .

```
$ ssh-keygen -t rsa
```

2. Add gudab's public key to hostnae

```
$ ssh-copy-id -i ~/.ssh/id_rsa.pub gudab@<hostname>
```

3. Test connecting without password

```
$ ssh gudab@<hostname>
```

Note: Host status's metrics are not supported when the monitoring server runs on windows OS.

● Edit gudab's SSH properties file

Set Linux Service Account to file at gudab/config/metrics_os_fetcher/linux_SSH_default_Info.properties

Field setting
- linux.ssh.default.user：Linux Service Account at the monitoring side.
- linux.ssh.default.keyFile：directory to gudab's private key.
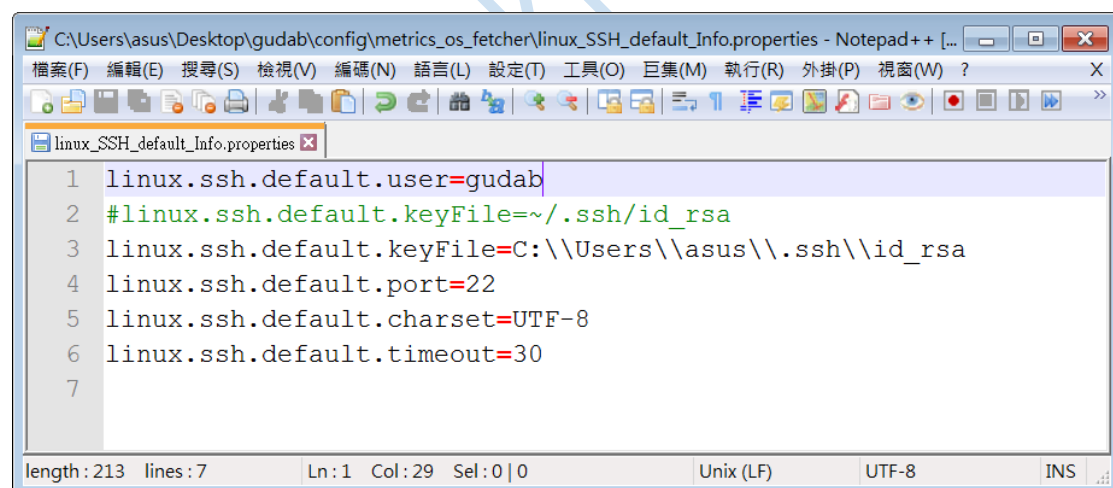
2-2 SSH properties file (for Windows)

2.3. Edit gudab properties file

There are many important setting in gudab/config/gudab.properties file
1. gudab.server.port : Web server external port; port value can be adjusted to avoid program conflicts.

2. gudab.consoledb. *: Gudab collects metrics, information and store in MongoDB. It is named as console DB in order to distinguish it from the monitored object. Its password can be changed via changePwd.sh (.bat).

3. gudab.mail.smtp.* :Set Email information to file at gudab/config/gudab.properties and allow gudab to send mail of forget password or alert。
   Example of Password setting shown in the picture below.

4. gudab.monitor.period : monitoring interval (unit: minutes)

5. gudab.restore.S2R enable : change restore object to mongos(router)

6. gudab.fullbackup. *: delay mamber of root directory and port range under full backup and synchronized delay seconds.

7. gudab.metrics. *: Quartz scheduling framework. Default to perform at 1:00 daily. Metrics are only retained for 30 days.

8. gudab.oplog-backup. *: Please refer to 7. gudab.metrics.

```
C:\Users\asus\Desktop\gudab\config\gudab.properties - Notepad++ [Administrator]
檔案(F)  編輯(E)  搜尋(S)  檢視(V)  編碼(N)  語言(L)  設定(T)  工具(O)  巨集(M)  執行(R)  外掛(P)  視窗(W)  ?

gudab.properties

 1  # guard of database
 2
 3  gudab.server.port=8080
 4
 5  gudab.consoledb.address=localhost:27027
 6  gudab.consoledb.auth=root:Z3VkYWI=
 7
 8  gudab.mail.smtp.server=smtp.gmail.com
 9  gudab.mail.smtp.port=587
10  gudab.mail.smtp.ttls=true
11  gudab.mail.smtp.account=service@gudab.com
12  gudab.mail.smtp.password=dDQ5NDRQMjc3MQ==
13
14  # unit: minute
15  gudab.monitor.period=1
16  gudab.restore.S2R_enable=false
17
18  # "./" mean relatively to gudabHome path
19  gudab.fullbackup.mongodRootPath=./mongod_repository
20  gudab.fullbackup.hiddenRootPath=./fullbackup_hidden_mongo
21  gudab.fullbackup.portRegisterRange=24944~34944
22  gudab.fullbackup.hiddenDelaySecond=3600
23
24  # --- cron ---
25  #  Field Name          Mandatory   Allowed Values         Allowed Special Characters
26  # 1 Seconds             YES         0-59                   , - * /
27  # 2 Minutes             YES         0-59                   , - * /
28  # 3 Hours               YES         0-23                   , - * /
29  # 4 Day of month        YES         1-31                   , - * ? / L W
30  # 5 Month               YES         1-12 / JAN-DEC         , - * /
31  # 6 Day of week         YES         1-7 / SUN-SAT          , - * ? / L #
32  # 7 Year                NO          empty / 1970-2099      , - * /
33  gudab.metrics.housekeeping.cron=* * 01 * * ?
34  gudab.metrics.housekeeping.keep-days=30
35  gudab.oplog-backup.housekeeping.cron=* * 01 * * ?
36  gudab.oplog-backup.housekeeping.keep-days=7

Prop length : 1,187   lines : 36        Ln : 16   Col : 31   Sel : 0 | 0        Windows (CR LF)   UTF-8        INS
```

2-2 gudab properties file (for Windows)

2.4. Firewall port setting (optional For full backup)

Current Gudab full backup is to establish delayed member through Gudab server, therefore certain ports need to be opened for monitoring objects so delayed members can be connected.

From "**2.3. edit gudab properties file**", we can see gudab.fullbackup.portRegisterRange is between 24944~34944. Please start from the smallest port number.

2.5. Prepare file to designated path (optional for full backup)

In production environment, setting access control is a basic requirement whether it's ReplicaSet of Shard. Therefore when establishing delayed members, Keyfile is required for identification and it has to be activated by the same .exe file as the monitoring object.

- fullbackup_hidden_mongo directory
  Place Keyfile and name <primary hostport>.keyfile。
  If adding delayed member to ReplicaSet and its primary member's hostname= server1、port = 20011，The the Keyfile path is as follow
  ./gudab/fullbackup_hidden_mongo/**server120011.keyfile**

- mongod_repository directory
  Place the corresponding version of MongoD mongod.
  Example 1. MongoDB's version of the monitoring object is v3.4.10 and Gudab runs on Linux then the download path of v3.4 mongod is as follow.
  ./gudab/mongod_repository/3.4/linux/mongod
  Example 2. MongoDB's version of the monitoring object is v3.6.2 and Gudab runs on windows then the download path of v3.6 mongod.exe.is as follow.
  .\gudab\mongod_repository\3.6\windows\mongod.exe
  Note windows requires to include libeay32.dll and ssleay32.dll (provide when downloading msi)