Mongo DBA

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# Chapter 1: Authentication, authorization; creating users and granting permissions

1. *How to enable authentication for mongod server?*

Restart server with option **--auth** (or **auth=true** in config file)

**mongod --auth**

1. *What if you created no user but start server with --auth mode?*

You cannot run any command

1. *How to create users and grant permissions to them?*

Firstly, stop your mongod server, and then start the server without --auth parameter.

**mongod --port <Your Port>**

Then, use admin database.

**use admin**

Then create user:

**db.createUser(**

**{**

**user : "admin",**

**pwd : "pass",**

**roles: [**

**{**

**role : "readWrite",**

**db : "admin"**

**},**

**{**

**role: "userAdminAnyDatabase",**

**db : "admin"**

**}**

**]**

**});**

A success message will be returned if everything is okay.

In MongoDB use role-base-authentication. New users are granted permissions by ROLEs.

Table of roles available in MongoDB:

|  |  |  |
| --- | --- | --- |
| **Role** | **Description** | **VD** |
| read | Allows user to read from a given database | **{role: “read”, db: “neosend”}** |
| readWrite | Allows user to read/write access to given database | **{role: “readWrite”, db: “neosend”}** |
| dbAdmin | Perform administrative functions within the given dbs:   * Creating/deleting indexes * Viewing statistics * Accessing **system.profile** collections | **{role: “dbAdmin”, db: “neosend”}** |
| userAdmin | Allows user to write to the **system.users** collection:   * Create/delete users for this db * Administer the users for this db | **{role: “userAdmin”, db: “neosend”}** |
| dbOwner | Combines permissions of **readWrite**, **dbAdmin** and **userAdmin** roles | **{role: “dbOwner”, db: “neosend”}** |
| clusterManager | Only for **admin** database. Manage the cluster, not data. | **aa** |
| clusterMonitor | For **admin** database only. Access to stats and commands that collect stats (for the **admin** database) |  |
| hostManager | For **admin** database only. Manage and monitor host level services |  |
| clusterAdmin | For **admin** database only. Full admin access to all functions relate to sharding and replica set.  Combination of **clusterManager, clusterMonitor** and **hostManager** roles. | **Read more at** [**http://docs.mongodb.org/manual/reference/user-privileges/#clusterAdmin%23clusterAdmin**](http://docs.mongodb.org/manual/reference/user-privileges/#clusterAdmin%23clusterAdmin) |
| backup | For **admin** database only.  Have permissions to back up the entire system. |  |
| restore | For **admin** database only. Have rights to restore entire system from backups |  |
| readAnyDatabase | Available for **admin** database only.  Have permissions to read all databases | **Read more at** [**http://docs.mongodb.org/manual/reference/user-privileges/#readAnyDatabase%23readAnyDatabase**](http://docs.mongodb.org/manual/reference/user-privileges/#readAnyDatabase%23readAnyDatabase) |
| readWriteAnyDatabase | For **admin** database only. Have permissions to read/write to all databases | **Read more at** [**http://docs.mongodb.org/manual/reference/user-privileges/#readWriteAnyDatabase%23readWriteAnyDatabase**](http://docs.mongodb.org/manual/reference/user-privileges/#readWriteAnyDatabase%23readWriteAnyDatabase) |
| userAdminAnyDatabase | For **admin** database only. Have userAdmin permission on all databases | **Read more at** [**http://docs.mongodb.org/manual/reference/user-privileges/#userAdminAnyDatabase%23userAdminAnyDatabase**](http://docs.mongodb.org/manual/reference/user-privileges/#userAdminAnyDatabase%23userAdminAnyDatabase) |
| dbAdminAnyDatabase | For **admin** database only. Have dbAdmin permission on all databases | **Read more at** [**http://docs.mongodb.org/manual/reference/user-privileges/#dbAdminAnyDatabase%23dbAdminAnyDatabase**](http://docs.mongodb.org/manual/reference/user-privileges/#dbAdminAnyDatabase%23dbAdminAnyDatabase) |

When you are using a certain database, you have to **auth(u, p)** and have permission to create user in order to create new user for the database.

1. *Update user of a database?*

You need to have at least dbAdmin role to use this method:

**db.updateUser( "foo", { roles: [ { role : "dbAdmin", db : "blog" } ] })**

1. *Get all users of a database*

**db.getUsers()**

1. *Delete a user*

**db.removeUser(“username”)**

1. *Authentication in Replica mode?????? (Need research more)*

# Chapter 2: Managing Servers

(prepare linux environment for practicing)

1. A
2. 2
3. A

# Chapter 3: Upgrade MongoDB server

# Chapter 4: Aggregate framework

# Chapter 5: Indexing and managing indexes

# Chapter 6: GridFS

# Chapter 7: Optimization

# Chapter 8: Backing Up and Restoring

# Chapter 9: Replication

# Chapter 10: Sharding

# Chapter 11: Misc (balancers, config servers, …)

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