

# Gateway and IoT protocols

Team Emertxe



# Installing RabbitMQ Server



Run these commands to install

- **Step 1 - Install RabbitMQ on Ubuntu**

```
echo 'deb http://www.rabbitmq.com/debian/ testing main' | sudo tee  
/etc/apt/sources.list.d/rabbitmq.list
```

```
wget -O- https://www.rabbitmq.com/rabbitmq-release-signing-key.asc | sudo apt-key add  
sudo apt-get update
```

```
sudo apt install rabbitmq-server
```

- **Step 2 - Manage RabbitMQ Service**

```
sudo update-rc.d rabbitmq-server defaults
```

```
sudo service rabbitmq-server start
```

- To stop

```
sudo service rabbitmq-server stop
```



# Installing RabbitMQ Server



- **Step 3 - Create Admin User in RabbitMQ**

```
sudo rabbitmqctl add_user admin password
```

```
sudo rabbitmqctl set_user_tags admin administrator
```

```
sudo rabbitmqctl set_permissions -p / admin ".*" ".*" "
```

- **Step 4 - Setup RabbitMQ Web Management Console**

```
sudo rabbitmq-plugins enable rabbitmq_management
```

open the below link

<http://localhost:15672>

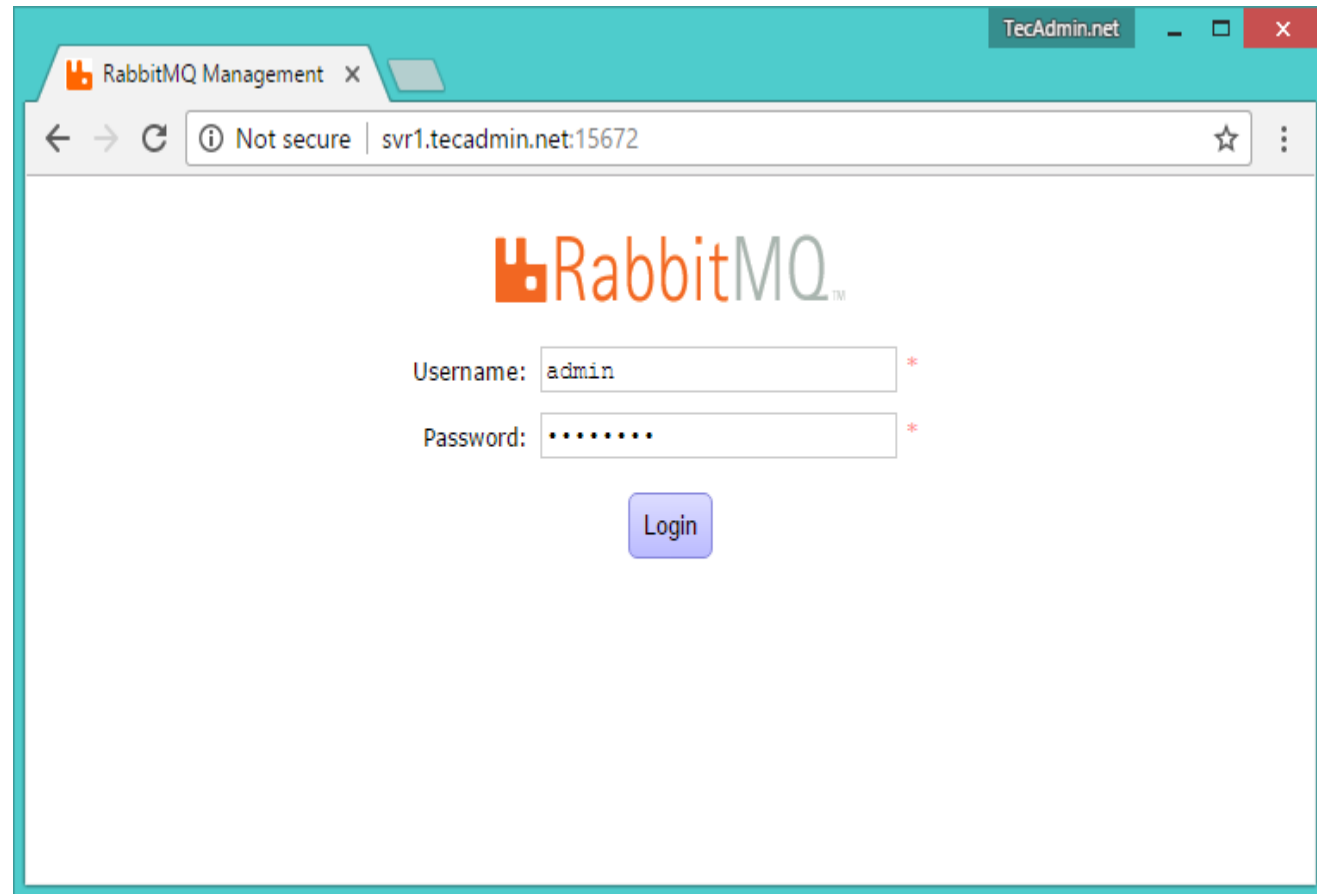
port no of rabbitmq is 15672



- open the below link

<http://localhost:15672>

- port no of rabbitmq is 15672
- Use the username and password created in step 3



After login, you will get the RabbitMQ management web interface dashboard.

The screenshot shows the RabbitMQ Management web interface in a browser window. The browser tab is titled "RabbitMQ Management" and the address bar shows "svr1.tecadmin.net:15672/#/". The page header includes the RabbitMQ logo, the user "admin", and a "Log out" button. The cluster information is "rabbit@PC237 (change)" and the version is "RabbitMQ 3.6.9, Erlang 19.3". The navigation menu includes "Overview", "Connections", "Channels", "Exchanges", "Queues", and "Admin". The "Overview" section is active and displays a "Totals" section with the following metrics: Queued messages (chart: last minute) (?), Currently idle, Message rates (chart: last minute) (?), Currently idle, and Global counts (?). Below these are five buttons: "Connections: 0", "Channels: 0", "Exchanges: 8", "Queues: 0", and "Consumers: 0". The "Node" section shows "Node: rabbit@PC237 (More about this node)" and a table with the following data:

File descriptors (?)	Socket descriptors (?)	Erlang processes	Memory	Disk space	Rates mode	Info	Reset stats DB +/-
53 1024 available	0 829 available	324 1048576 available	52MB 628MB high watermark	963MB 48MB low watermark	basic	Disc 1	Reset

At the bottom of the "Node" section, there is a "Reset stats on all nodes" button.

## To create queue

Select queue

Add queue

localhost:15672/#/queues

RabbitMQ™ 3.6.15 Erlang 20.2.2

Overview Connections Channels Exchanges **Queues** Admin

### Queues

▼ All queues (1)

Pagination

Page 1 of 1 - Filter:   Regex ?

Overview			Messages			Message rates		
Name	Features	State	Ready	Unacked	Total	incoming	deliver / get	ack
test-queue	D	idle	3	0	3	0.00/s	0.00/s	0.00/s

▶ Add a new queue

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# To create queue

Add queue name

Add queue

The screenshot shows the RabbitMQ web interface at localhost:15672/#/queues. The 'Queues' tab is active. A table lists existing queues, with 'test-queue' highlighted. Below the table, the 'Add a new queue' form is visible, with the 'Name' field containing 'test-queue'. The 'Durability' is set to 'Durable' and 'Auto delete' is set to 'No'. The 'Arguments' field is empty. At the bottom of the form, there is an 'Add queue' button.

localhost:15672/#/queues

RabbitMQ 3.6.15 Erlang 20.2.2

Overview Connections Channels Exchanges **Queues** Admin

agination

age 1 of 1 - Filter:   Regexp ?

Overview			Messages			Message rates		
Name	Features	State	Ready	Unacked	Total	Incoming	deliver / get	ack
test-queue	D	idle	3	0	3	0.00/s	0.00/s	0.00/s

▼ Add a new queue

Name:  \*

Durability:

Auto delete:

Arguments:  =

Add [Message TTL ?](#) | [Auto expire ?](#) | [Max length ?](#) | [Max length bytes ?](#)  
[Dead letter exchange ?](#) | [Dead letter routing key ?](#) | [Maximum priority ?](#)  
[Lazy mode ?](#) | [Master locator ?](#)

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# To create exchange

Select exchange

Add exchange name

Select direct type

Add exchange

The screenshot shows the RabbitMQ management interface. At the top, there are tabs for Overview, Connections, Channels, and Exchanges. Below the tabs is a table listing existing exchanges:

Exchange Name	Type	Options
amq.match	headers	D
amq.rabbitmq.log	topic	D I
amq.rabbitmq.trace	topic	D I
amq.topic	topic	D
test-exchange	direct	D

Below the table is a section titled "Add a new exchange" with the following fields:

- Name: test-exchange
- Type: dropdown menu with options: direct, headers, direct (highlighted), fanout, topic
- Durability: ?
- Auto delete: ?
- Internal: ? No
- Arguments: =

At the bottom of the form is a button labeled "Add exchange".



## To bind exchange



The screenshot shows the RabbitMQ Management interface. At the top, the RabbitMQ logo is displayed along with version information: 3.6.15 and Erlang 20.2.2. Below the logo is a navigation menu with tabs for Overview, Connections, Channels, Exchanges, Queues, and Administration. The 'Exchanges' tab is currently selected. Underneath the navigation, there is a 'Page' selector showing '1' of '1' and a 'Filter' input field. A 'Regex' checkbox is also present. The main content area is a table listing various exchanges. The table has columns for Name, Type, Features, Message rate in, Message rate out, and a +/- toggle. The 'test-exchange' row is highlighted in orange, and a dashed box with an arrow points to it from the text 'Select exchange'.

Name	Type	Features	Message rate in	Message rate out	+/-
(MQP default)	direct	D			
nq.direct	direct	D			
nq.fanout	fanout	D			
nq.headers	headers	D			
nq.match	headers	D			
nq.rabbitmq.log	topic	D I			
nq.rabbitmq.trace	topic	D I			
nq.topic	topic	D			
<b>test-exchange</b>	direct	D	0.00/s	0.00/s	

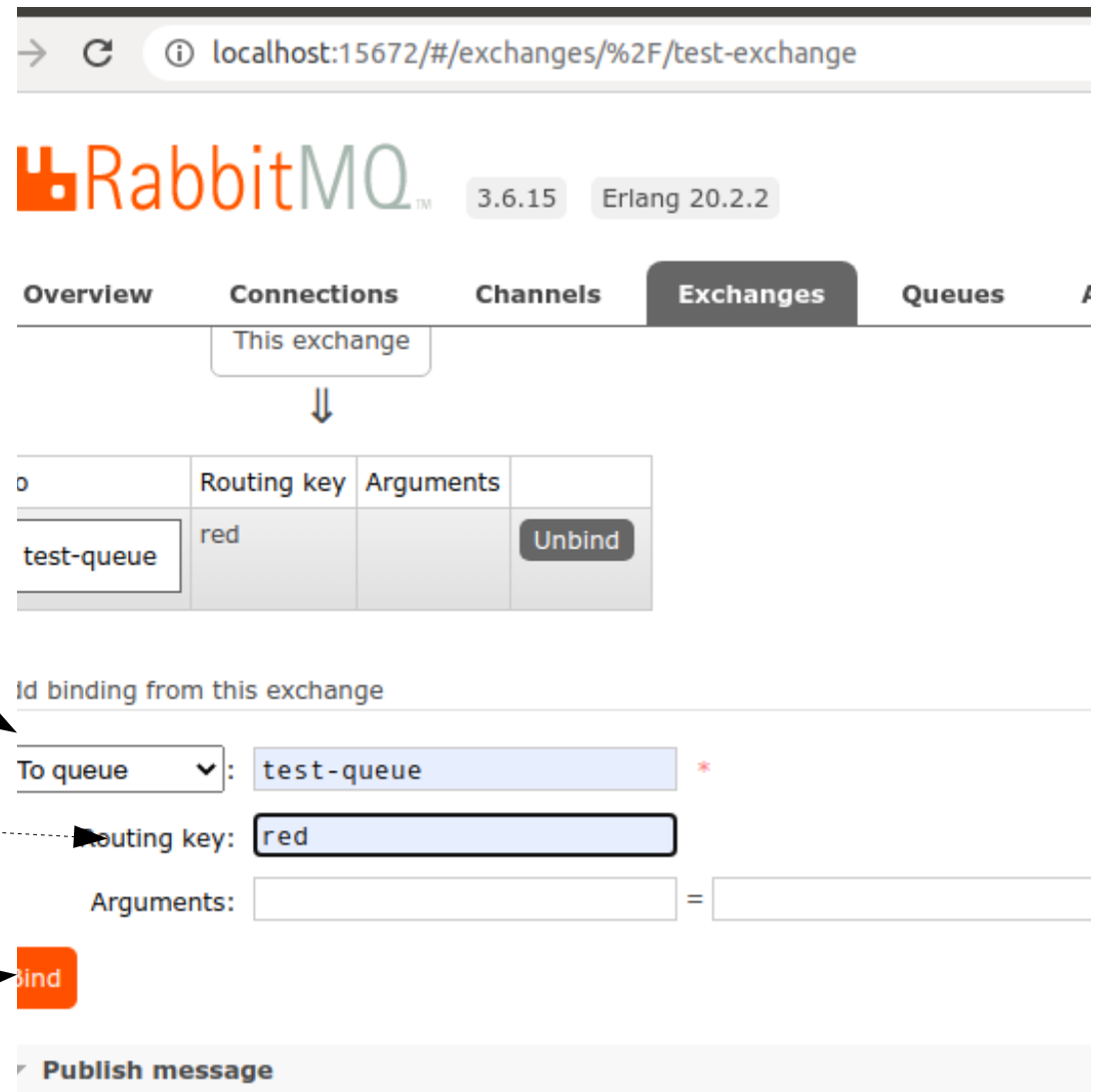
Select exchange

## To bind exchange

Add queue name

Add routing key

bind exchange



The screenshot shows the RabbitMQ web interface at localhost:15672/#/exchanges/%2F/test-exchange. The interface includes the RabbitMQ logo, version 3.6.15, and Erlang 20.2.2. The 'Exchanges' tab is active, and a dropdown menu shows 'This exchange'. Below this is a table with one row for the 'test-queue' with a routing key of 'red' and an 'Unbind' button. Underneath, the 'Id binding from this exchange' section contains a 'To queue' dropdown set to 'test-queue', a 'Routing key' field with 'red', and an 'Arguments' field. A 'bind' button is visible at the bottom of the binding section.

Queue	Routing key	Arguments	
test-queue	red		Unbind

Id binding from this exchange

To queue  \*

Routing key:

Arguments:  =

Publish message

0/100

Publish message

Routing key: red

Delivery mode: 1 - Non-persistent

Headers: ? = String

Properties: ? =

Payload: hey

Publish message

Delete this exchange

# To publish message

Select publish message

Select routing key

Enter the message

Publish message

# To get message

Select Queue

Select get message

Get message



3.6.15

Erlang 20.2.2

Overview

Connections

Channels

Exchanges

**Queues**

Admin

PROCESS MEMORY

Consumers

Bindings

Publish message

**Get messages**

Warning: getting messages from a queue is a destructive action. ?

Requeue: Yes ▾

Encoding: Auto string / base64 ▾ ?

Messages: 1

**Get Message(s)**

Move messages

Delete

# To get message

Received message in queue

message 2

---

The server reported **1** messages remaining.

Exchange	test-exchange
Routing Key	red
Redelivered	•
Properties	delivery_mode: 1 headers:
Payload 3 bytes Encoding: string	hey

- ▶ **Move messages**
- ▶ **Delete**
- ▶ **Purge**