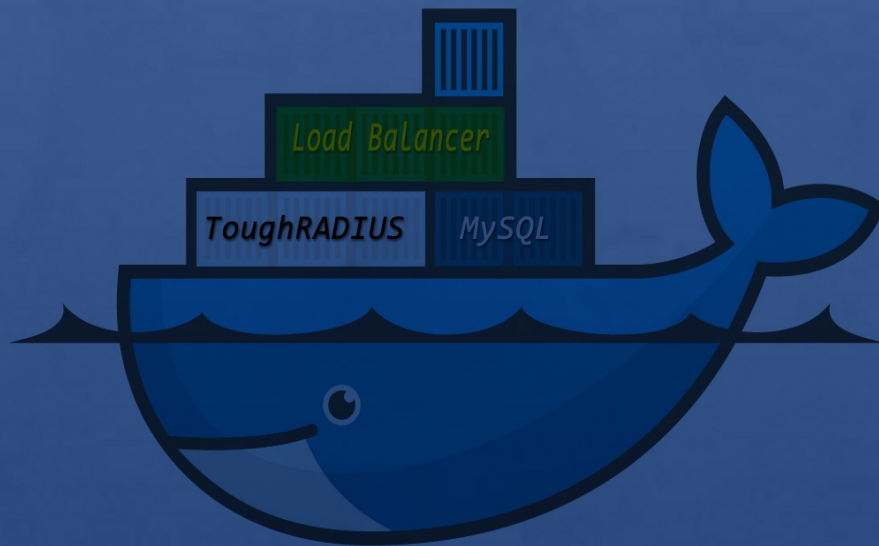


# *ToughRADIUS* *Book*



# docker

*docs.toughradius.net*

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## **TOUGHRADIUS**

ToughRADIUS is a Radius server software developed based on Java & SpringBoot (since v6.x), which implements the standard Radius protocol and supports the extension of Radius protocol.

ToughRADIUS can be understood as a Radius middleware, and it does not implement all of the business functions. But it's easy to Easier to extended development.

ToughRADIUS is similar to freeRADIUS, But it's simpler to use, Easier to extended development.

## 常见问题

### **Regarding dialing 691, why is the password correct? Dial-up authentication will also prompt 691 password error?**

Is 691 a general error defined by the authentication protocol, but it does not mean that it is a password error. He indicates that the backend authentication has an error, which causes the authentication to fail. The reason for the authentication failure may be that the account expires, the password is incorrect, and the account does not exist. The MAC or VLAN is incorrectly bound, the account is online, etc. You can use the system log to query the user for the authentication failure. In the system log interface, enter the user name as the keyword to query.

## Quickstart

### install

#### System environment dependence

operating system

- Linux
- Windows
- MacOS

java version: 1.8+

database server(default): MySQL/MariaDB

#### Database settings

Please see [Database setting](#)

#### Running the main program

```
java -jar -Xms256m -Xmx1024G /opt/toughradius-latest.jar --spring.profiles.active=prod
```

Note the file (toughradius-latest.jar) path

#### Linux systemd config

centos 7 example

write config files( see scripts dir)

```
/etc/toughradius.env  
/usr/lib/systemd/system/toughradius.service
```

Run the following command

```
systemctl enable toughradius  
systemctl start toughradius
```

## Database settings

database server(default): MySQL/MariaDB

First confirm that the database has started

## Create db

```
create database toughradius DEFAULT CHARACTER SET utf8 COLLATE utf8_general_ci;
GRANT ALL ON toughradius.* TO raduser@'127.0.0.1' IDENTIFIED BY 'radpwd' WITH GRANT OPTION;FLUSH PRIVILEGES;
```

## Create tables

```
CREATE TABLE `tr_bras` (
  `id` INT(11) NOT NULL AUTO_INCREMENT,
  `identifier` VARCHAR(128) NULL DEFAULT NULL,
  `name` VARCHAR(64) NOT NULL,
  `ipaddr` VARCHAR(32) NULL DEFAULT NULL,
  `vendor_id` VARCHAR(32) NOT NULL,
  `secret` VARCHAR(64) NOT NULL,
  `coa_port` INT(11) NOT NULL,
  `auth_limit` INT(11) NULL DEFAULT NULL,
  `acct_limit` INT(11) NULL DEFAULT NULL,
  `status` ENUM('enabled','disabled') NULL DEFAULT NULL,
  `remark` VARCHAR(512) NULL DEFAULT NULL,
  `create_time` DATETIME NOT NULL,
  PRIMARY KEY (`id`),
  INDEX `ix_tr_bras_identifier` (`identifier`),
  INDEX `ix_tr_bras_ipaddr` (`ipaddr`)
)
COLLATE='utf8_general_ci'
ENGINE=InnoDB
;

CREATE TABLE `tr_config` (
  `id` INT(11) NOT NULL AUTO_INCREMENT,
  `type` VARCHAR(32) NOT NULL,
  `name` VARCHAR(128) NOT NULL,
  `value` VARCHAR(255) NULL DEFAULT NULL,
  `remark` VARCHAR(255) NULL DEFAULT NULL,
  PRIMARY KEY (`id`)
)
COLLATE='utf8_general_ci'
ENGINE=InnoDB
;

CREATE TABLE `tr_subscribe` (
  `id` INT(11) NOT NULL AUTO_INCREMENT,
  `node_id` INT(11) NOT NULL DEFAULT 0,
  `area_id` int(11) NOT NULL DEFAULT 0,
  `subscriber` VARCHAR(32) NULL DEFAULT NULL,
  `realname` VARCHAR(32) NULL DEFAULT NULL,
  `password` VARCHAR(128) NOT NULL,
  `bill_type` ENUM('flow','time') NOT NULL DEFAULT 'time',
  `domain` VARCHAR(128) NULL DEFAULT NULL,
  `addr_pool` VARCHAR(128) NULL DEFAULT NULL,
  `policy` VARCHAR(512) NULL DEFAULT NULL,
  `is_online` INT(11) NULL DEFAULT NULL,
  `active_num` INT(11) NULL DEFAULT NULL,
  `flow_amount` BIGINT(20) NULL DEFAULT NULL,
  `bind_mac` TINYINT(1) NULL DEFAULT NULL,
  `bind_vlan` TINYINT(1) NULL DEFAULT NULL,
  `ip_addr` VARCHAR(32) NULL DEFAULT NULL,
  `mac_addr` VARCHAR(32) NULL DEFAULT NULL,
  `in_vlan` INT(11) NULL DEFAULT NULL,
  `out_vlan` INT(11) NULL DEFAULT NULL,
  `up_rate` DECIMAL(6,3) NULL DEFAULT NULL,
  `down_rate` DECIMAL(6,3) NULL DEFAULT NULL,
```

```

`up_peak_rate` DECIMAL(6,3) NULL DEFAULT NULL,
`down_peak_rate` DECIMAL(6,3) NULL DEFAULT NULL,
`up_rate_code` VARCHAR(32) NULL DEFAULT NULL,
`down_rate_code` VARCHAR(32) NULL DEFAULT NULL,
`status` ENUM('enabled','disabled') NULL DEFAULT NULL,
`remark` VARCHAR(512) NULL DEFAULT NULL,
`begin_time` DATETIME NOT NULL,
`expire_time` DATETIME NOT NULL,
`create_time` DATETIME NOT NULL,
`update_time` DATETIME NULL DEFAULT NULL,
PRIMARY KEY (`id`),
INDEX `ix_tr_subscribe_subscriber` (`subscriber`),
INDEX `ix_tr_subscribe_expire_time` (`expire_time`),
INDEX `ix_tr_subscribe_status` (`status`),
INDEX `ix_tr_subscribe_create_time` (`create_time`),
INDEX `ix_tr_subscribe_update_time` (`update_time`)
)
COLLATE='utf8_general_ci'
ENGINE=InnoDB
;

```

## Insert test data

```

INSERT INTO toughradius.tr_bras
(identifier, name, ipaddr, vendor_id, secret, coa_port, auth_limit, acct_limit, STATUS, remark, create_time)
VALUES ('radius-tester', 'radius-tester', '127.0.0.1', '14988', 'secret', 3799, 1000, 1000, NULL, '0', '2019-03-01 14:07:46');

INSERT INTO toughradius.tr_subscribe
(node_id, area_id, subscriber, realname, password, bill_type, domain, addr_pool, policy, is_online, active_num, flow_amount,
bind_mac, bind_vlan, ip_addr, mac_addr, in_vlan, out_vlan, up_rate, down_rate, up_peak_rate, down_peak_rate, up_rate_code,
down_rate_code, status, remark, begin_time, expire_time, create_time, update_time)
VALUES (0, 0, 'test01', '', '888888', 'time', null, null, null, null, 10, 0, 0, 0, '', '', 0, 0, 10.000, 10.000, 100.000, 100.000,
'10', '10', 'enabled', '', '2019-03-01 14:13:02', '2019-03-01 14:13:00', '2019-03-01 14:12:59', '2019-03-01 14:12:56');

```