

@라운드 큐브 설치 및 웹 사이트 구성

라운드 큐브 패키지는 오픈소스, ftp로 옮겨서 tar 명령어로 압축을 풀자.

```
root@ca:/home/user01# tar -zxvf roundcubemail-1.2.0-complete.tar.gz
```

압축이 풀리면 roundcube-1.2.0이라는 디렉터리가 생성된다. 이것을 /var/www/ 아래로 옮겨주자. 옮길 때 디렉터리 이름을 roundcube로 간단하게 바꿔서 옮기자.

```
root@ca:/home/user01# mv roundcubemail-1.2.0 /var/www/roundcube
```

/var/www/roundcube 디렉터리의 하위 파일들의 소유권을 변경해주자.

```
root@ca:~# cd /var/www/  
root@ca:/var/www# chown www-data:www-data ./roundcube -R  
root@ca:/var/www# _
```

https 사이트를 구성해야 한다. 우선 루트 인증기관에서 CN을 mail.worldsign.org로 정해진 인증서를 발급받고 서버로 옮긴다. 이 과제에선 메일과 인증기관이 같은 서버에 위치해있기 때문에 따로 옮겨줄 필요가 없다.

인증서 요청

```
root@ca:~# mkdir /webmail-certs  
root@ca:~# cd /webmail-certs/  
root@ca:/webmail-certs# openssl req -out mail.worldsign.org.csr -newkey rsa:1024 -nodes -keyout mail.  
worldsign.org.key  
Generating a 1024 bit RSA private key  
....+++++  
.....+++++  
writing new private key to 'mail.worldsign.org.key'  
-----  
You are about to be asked to enter information that will be incorporated  
into your certificate request.  
What you are about to enter is what is called a Distinguished Name or a DN.  
There are quite a few fields but you can leave some blank  
For some fields there will be a default value,  
If you enter '.', the field will be left blank.  
-----  
Country Name (2 letter code) [AU]:KR  
State or Province Name (full name) [Some-State]:Seoul  
Locality Name (eg, city) []:  
Organization Name (eg, company) [Internet Widgits Pty Ltd]:worldsign.org  
Organizational Unit Name (eg, section) []:  
Common Name (e.g. server FQDN or YOUR name) []:mail.worldsign.org  
Email Address []:  
  
Please enter the following 'extra' attributes  
to be sent with your certificate request  
A challenge password []:  
An optional company name []:  
root@ca:/webmail-certs# _
```

인증서 서명

```

root@ca:/webmail-certs# openssl ca -days 365 -extensions v3_req -policy policy_anything -in mail.worldsign.org.csr -out mail.worldsign.org.crt
Using configuration from /usr/lib/ssl/openssl.cnf
Enter pass phrase for /etc/ssl/worldsign-CA/private/cakey.pem:
Check that the request matches the signature
Signature ok
Certificate Details:
  Serial Number:
    b6:d7:1c:08:c2:ec:9e:d3
  Validity
    Not Before: Mar 23 06:11:36 2017 GMT
    Not After : Mar 23 06:11:36 2018 GMT
  Subject:
    countryName           = KR
    stateOrProvinceName   = Seoul
    organizationName      = worldsign.org
    commonName            = mail.worldsign.org
  X509v3 extensions:
    X509v3 CRL Distribution Points:

      Full Name:
        URI:http://crl.worldsign.org/worldsign-CA.crl

    X509v3 Basic Constraints:
      CA:FALSE
    X509v3 Key Usage:
      Digital Signature, Non Repudiation, Key Encipherment
Certificate is to be certified until Mar 23 06:11:36 2018 GMT (365 days)
Sign the certificate? [y/n]:y

1 out of 1 certificate requests certified, commit? [y/n]:y
Write out database with 1 new entries
Data Base Updated
root@ca:/webmail-certs# _

```

발급받은 인증서를 사용하여 HTTPS사이트를 구성해야 한다. 우선 인증서를 https사이트의 인증서가 위치할 디렉터리로 옮겨준다.

```

root@ca:/webmail-certs# ls
mail.worldsign.org.crt  mail.worldsign.org.csr  mail.worldsign.org.key
root@ca:/webmail-certs# mkdir /etc/apache2/ssl
root@ca:/webmail-certs# mv * /etc/apache2/ssl/_

```

a2en 명령어를 사용하여 ssl 모드와 default-ssl 사이트를 활성화 시켜준 다음 아파치 서버를 재 시작해준다.

```

root@ca:~# a2enmod ssl
Considering dependency setenvif for ssl:
Module setenvif already enabled
Considering dependency mime for ssl:
Module mime already enabled
Considering dependency socache_shmcb for ssl:
Enabling module socache_shmcb.
Enabling module ssl.
See /usr/share/doc/apache2/README.Debian.gz on how to configure
tes.
To activate the new configuration, you need to run:
  service apache2 restart
root@ca:~# a2ensite default-ssl.conf
Enabling site default-ssl.
To activate the new configuration, you need to run:
  service apache2 reload
root@ca:~# _

```

default-ssl 사이트를 편집하여 웹 접속 시, roundcube에 접근이 가능하도록 한다.

vim /etc/apache2/site-enables/default-ssl.conf

```
1 <IfModule mod_ssl.c>
2     <VirtualHost _default_:443>
3
4         ServerName mail.worldsign.org
5
6         DocumentRoot /var/www/roundcube
7
8         ErrorLog ${APACHE_LOG_DIR}/webmail-error.log
9         CustomLog ${APACHE_LOG_DIR}/webmail-access.log combined
10
11         SSLEngine on
12
13         SSLCertificateFile      /etc/apache2/ssl/mail.worldsign.org.crt
14         SSLCertificateKeyFile    /etc/apache2/ssl/mail.worldsign.org.key
15
16         SSLCACertificatePath    /etc/ssl/certs/
17         SSLCACertificateFile     /etc/ssl/certs/worldsign-CA.pem
18
19     </VirtualHost>
20 </IfModule>
21
22
```

추가로 /etc/apache2/apache2.conf를 수정해줘야 한다. roundcube 디렉토리에 보면 .htaccess 파일이 있기 때문에 AllowOverride 구문을 none에서 all로 수정해줘야 함.

```
164 <Directory /var/www/>
165     Options Indexes FollowSymLinks
166     AllowOverride all
167     Require all granted
168 </Directory>
```

아파치 서비스를 재 시작시켜준다.

systemctl restart apache2.service

라운드 큐브 구성을 위해 sql, php 관련 패키지를 설치한다.

```
root@ca:~# apt-get install libapache2-mod-php5 mysql-server phpmyadmin
```

mysql root 사용자 패스워드 지정.

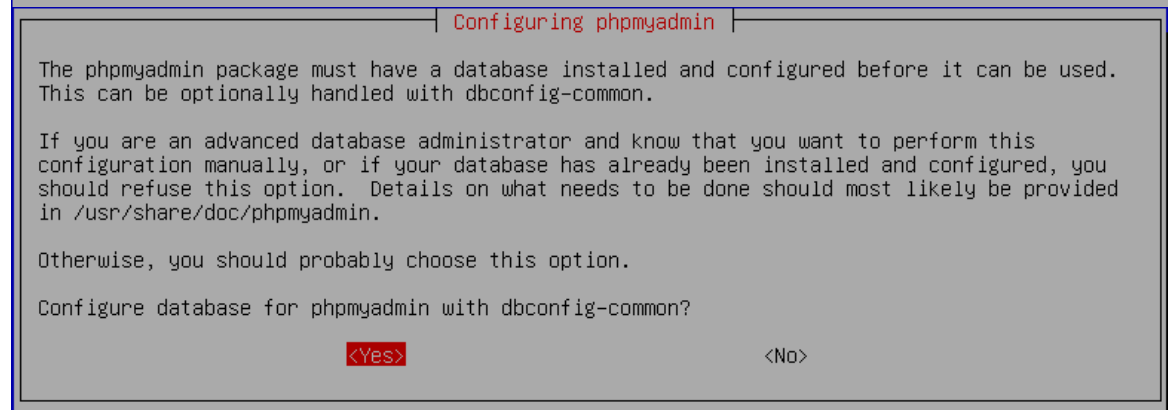
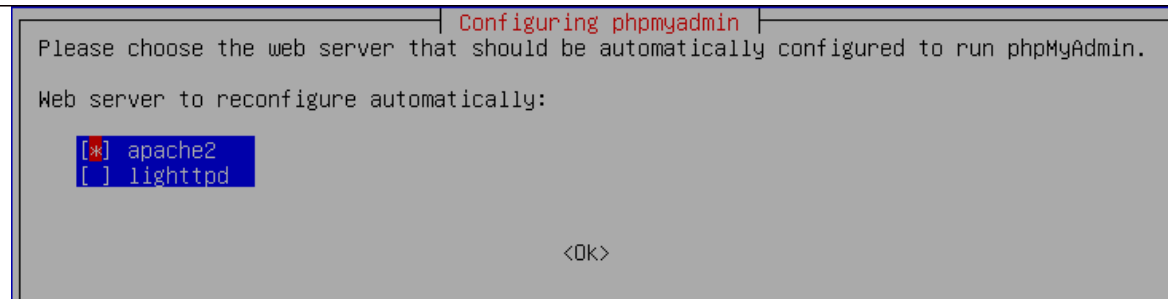
Configuring mysql-server-5.5
While not mandatory, it is highly recommended that you set a password for the MySQL administrative "root" user.

If this field is left blank, the password will not be changed.

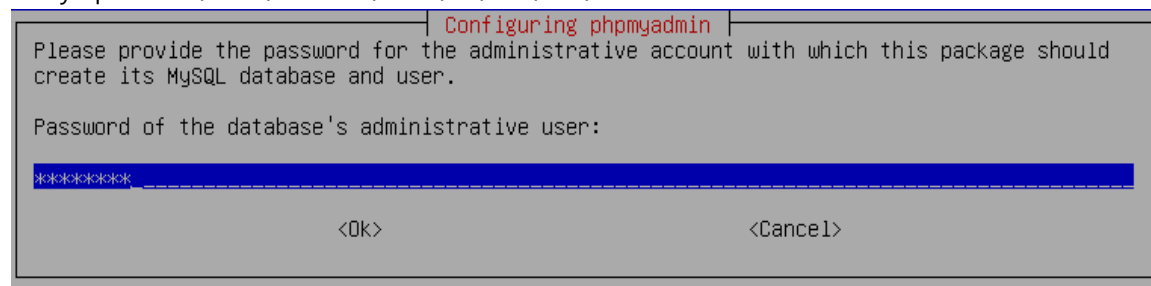
New password for the MySQL "root" user:

<Ok>

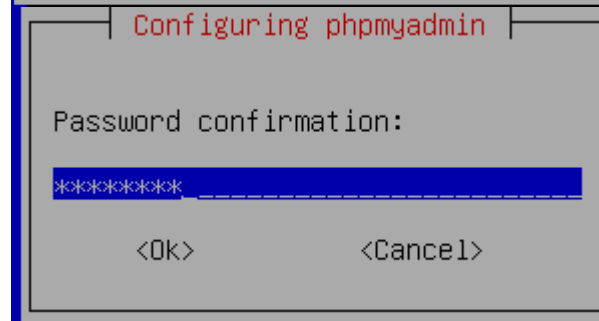
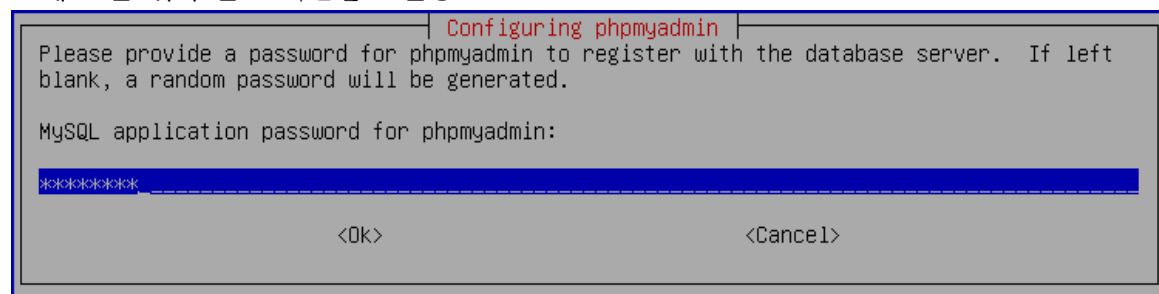
#phpmyadmin 설치



mysql root 계정 비밀번호와 함께 지정해준다.



애 또한 위와 같은 비밀번호 설정



mysql에 정상적으로 접근이 가능한지 확인한다.

```

root@ca:~# mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 52
Server version: 5.5.53-0+deb8u1 (Debian)

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> quit
Bye
root@ca:~#

```

vim /etc/php5/apache2/php.ini 에서 timezone을 설정해준다.

```

894 date.timezone = Asia/Seoul

```

@ 메일 설정

메일 서비스를 위한 패키지 설치

```

root@ca:~# apt-get install sensible-mda sendmail-cf sendmail-bin dovecot-imapd sasl2-bin

```

sasl 인증 데몬 실행

vim /etc/default/saslauthd

```

1 #
2 # Settings for saslauthd daemon
3 # Please read /usr/share/doc/sasl2-bin/README.Debian for details
4 #
5
6 # Should saslauthd run automatically on startup? (default: no)
7 START=yes
8
9 # Description of this saslauthd instance. Recommended.
10 # (suggestion: SASL Authentication Daemon)
11 DESC="SASL Authentication Daemon"
12
13 # Short name of this saslauthd instance. Strongly recommended.
14 # (suggestion: saslauthd)
15 NAME="saslauthd"
16

```

systemctl restart saslauthd.service

vim /etc/mailname

```

1 mail.worldsign.org

```

vim /etc/mail/local-host-names

```

1 localhost
2 ca.worldsign.org
3 mail.dreaminfo.biz
4 worldsign.org
5 dreaminfo.biz

```

vim /etc/mail/sendmail.mc

```

55 FEATURE(`no_default_msa')dn1
56 dn1 DAEMON_OPTIONS(`Family=inet6, Name=MTA-v6, Port=smtp, Addr=::1')dn1
57 DAEMON_OPTIONS(`Family=inet, Name=MTA-v4, Port=smtp')dn1
58 dn1 DAEMON_OPTIONS(`Family=inet6, Name=MSP-v6, Port=submission, M=Ea, Addr=::1')dn
59 DAEMON_OPTIONS(`Family=inet, Name=MSP-v4, Port=submission, M=Ea')dn1
~^
96 dn1 #
97 include(`/etc/mail/m4/dialup.m4')dn1
98 include(`/etc/mail/m4/provider.m4')dn1
99 include(`/etc/mail/sasl/sasl.m4')dn1
~^
103 dn1 # Masquerading options
104 FEATURE(`always_add_domain')dn1
105 MASQUERADE_AS(`mail.worldsign.org')dn1
106 FEATURE(`allmasquerade')dn1
107 FEATURE(`masquerade_envelope')dn1
108
109 dn1 # Default Mailer setup
110 MAILER_DEFINITIONS
111 MAILER(`local')dn1
112 MAILER(`smtp')dn1

```

설정 순서 주의!

cf파일 생성

```
root@ca:~# sendmailconfig
```

서비스 재 시작

```
root@ca:~# systemctl restart sendmail.service
```

서비스 포트 동작 확인

```
root@ca:~# netstat -nl | grep 25
tcp        0      0 0.0.0.0:25          0.0.0.0:*          LISTEN
root@ca:~# _
```

IMAP 설정

vim /etc/dovecot/conf.d/10-auth.conf

```
10 disable_plaintext_auth = no
```

서비스 재 시작

```
root@ca:~# systemctl restart dovecot.service
```

서비스 포트 확인

```
root@ca:~# netstat -nl | grep 143
tcp        0      0 0.0.0.0:143         0.0.0.0:*          LISTEN
tcp6       0      0 :::143             :::*                LISTEN
root@ca:~#
```

홈 디렉터리를 가지는 로컬 사용자 계정 user01~user05 추가.

```
useradd -m user01
```

```
useradd -m user02
```

```
useradd -m user03
```

```
useradd -m user04
```

```
useradd -m user05
```

패스워드는 모두 "Pa\$\$worD"로 설정

```
passwd user01
```

```
passwd user02
```

```
passwd user03
```

```
passwd user04
```

```
passwd user05
```

메일 구성에 문제가 없는지 테스트 메일 전송

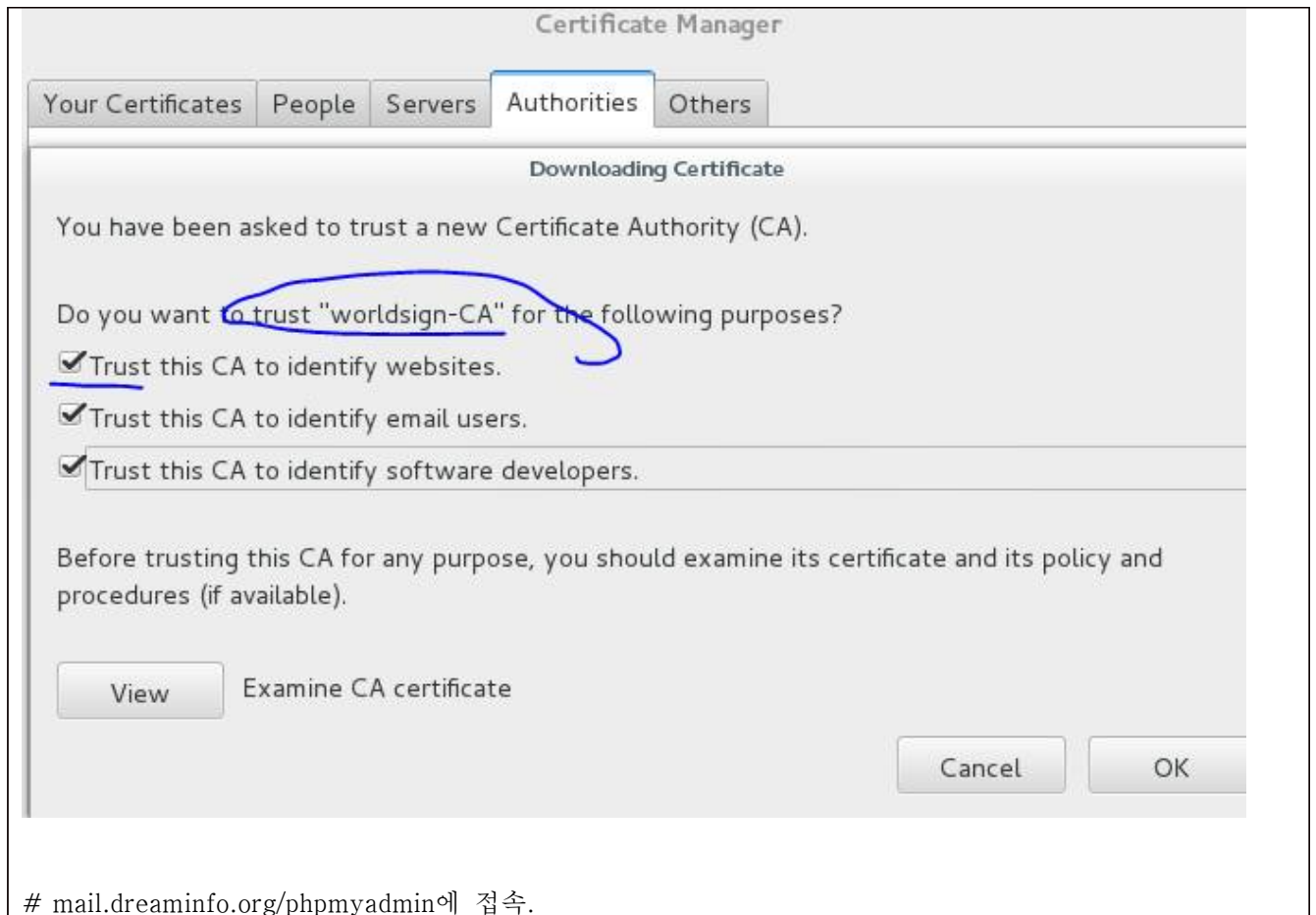
```
root@ca:~# telnet localhost 25
Trying ::1...
Trying 127.0.0.1...
Connected to localhost.
Escape character is '^]'.
220 ca.worldsign.org ESMTP Sendmail 8.14.4/8.14.4/Debian-8+deb8u1; Thu, 23 Mar 2017 16:51:39 +0900
(No UCE/URF) logging access from: localhost(OK)-localhost [127.0.0.1]
helo mail.worldsign.org
250 ca.worldsign.org Hello localhost [127.0.0.1], pleased to meet you
mail from: user02@worldsign.org
250 2.1.0 user02@worldsign.org... Sender ok
rcpt to: user03@worldsign.org
250 2.1.5 user03@worldsign.org... Recipient ok
data
354 Enter mail, end with "." on a line by itself
This is Test mail
.
250 2.0.0 v2N7ouea018156 Message accepted for delivery
quit
221 2.0.0 ca.worldsign.org closing connection
Connection closed by foreign host.
root@ca:~#
```

vim /var/mail/user03

```
1 From user02@mail.worldsign.org Thu Mar 23 16:51:39 2017
2 Return-Path: <user02@mail.worldsign.org>
3 Received: from mail.worldsign.org (localhost [127.0.0.1])
4     by ca.worldsign.org (8.14.4/8.14.4/Debian-8+deb8u1) with SMTP
5     for user03@worldsign.org; Thu, 23 Mar 2017 16:51:30 +0900
6 Date: Thu, 23 Mar 2017 16:50:56 +0900
7 From: user02@mail.worldsign.org
8 Message-Id: <201703230751.v2N7ouea018156@ca.worldsign.org>
9
10 This is Test mail
11
```

웹 브라우저를 사용하여 구성합니다. remote 클라이언트에서 <https://mail.worldsign.org/phpmyadmin>에 접속합니다.

접속 시, 인증서 오류를 해결하기 위해 remote 클라이언트에서 루트 인증기관의 인증서를 신뢰할 수 있는 인증서로 추가해줍니다.



phpMyAdmin

https://mail.worldsign.org/phpmyadmin/

phpMyAdmin

Welcome to phpMyAdmin

Language

English

Log in

Username: root

Password:

Go

DB이름은 roundcube, utf8_general_ci -> create

Databases SQL Status Users Export

Databases

Create database

roundcube utf8_general_ci Create

mysql > user > insert

Recent Favorites

- information_schema
- mysql
 - New
 - columns_priv
 - db
 - event
 - func
 - general_log
 - help_category
 - help_keyword
 - help_relation
 - help_topic
 - host
 - ndb_binlog_index
 - plugin
 - proc
 - procs_priv
 - proxies_priv
 - servers
 - slow_log
 - tables_priv
 - time_zone
 - time_zone_leap_second
 - time_zone_name
 - time_zone_transition
 - time_zone_transition_type
 - user

Showing rows 0 - 5 (6 total, Query took 0.0004 seconds.)

SELECT * FROM user

Number of rows: 25 Filter rows: Search this table

Sort by key: None

+ Options

	Host	User	Password
<input type="checkbox"/> Edit Copy Delete	localhost	root	*F0883930B8DD3FBFBD3C2AC2DFC7
<input type="checkbox"/> Edit Copy Delete	ca	root	*F0883930B8DD3FBFBD3C2AC2DFC7
<input type="checkbox"/> Edit Copy Delete	127.0.0.1	root	*F0883930B8DD3FBFBD3C2AC2DFC7
<input type="checkbox"/> Edit Copy Delete	::1	root	*F0883930B8DD3FBFBD3C2AC2DFC7
<input type="checkbox"/> Edit Copy Delete	localhost	debian-sys-maint	*E14523A3C4F4E47F29F914F90EB94
<input type="checkbox"/> Edit Copy Delete	localhost	phpmyadmin	*F0883930B8DD3FBFBD3C2AC2DFC7

Check All With selected: Change Delete Export

Number of rows: 25 Filter rows: Search this table

Query results operations

Print view Print view (with full texts) Export Display chart Create view

Column	Type	Function	Null	Value
Host	char(60)			localhost
User	char(16)			roundcube
Password	char(41)	PASSWORD		Pa\$\$worD
Select_priv	enum	--	<input type="radio"/> N <input type="radio"/> Y	

mysql > db > Insert



phpMyAdmin

Recent

Favorites

New

information_schema

mysql

New

columns_priv

db

event

func

Server: localhost » Database: mysql » Table: db

Browse

Structure

SQL

Search

Insert

Showing rows 0 - 0 (1 total, Query took 0.0002 seconds.)

SELECT * FROM `db`

Profiling

Number of rows: 25

Filter rows: Search this table

Column	Type	Function	Null	Value
Host	char(60)			localhost
Db	char(64)			roundcube
User	char(16)			roundcube
Select_priv	enum	--		<input type="radio"/> N <input checked="" type="radio"/> Y
Insert_priv	enum	--		<input type="radio"/> N <input checked="" type="radio"/> Y
Update_priv	enum	--		<input type="radio"/> N <input checked="" type="radio"/> Y
Delete_priv	enum	--		<input type="radio"/> N <input checked="" type="radio"/> Y
Create_priv	enum	--		<input type="radio"/> N <input checked="" type="radio"/> Y
Drop_priv	enum	--		<input type="radio"/> N <input checked="" type="radio"/> Y
Grant_priv	enum	--		<input type="radio"/> N <input checked="" type="radio"/> Y
References_priv	enum	--		<input type="radio"/> N <input checked="" type="radio"/> Y
Index_priv	enum	--		<input type="radio"/> N <input checked="" type="radio"/> Y
Alter_priv	enum	--		<input type="radio"/> N <input checked="" type="radio"/> Y
Create_tmp_table_priv	enum	--		<input type="radio"/> N <input checked="" type="radio"/> Y
Lock_tables_priv	enum	--		<input type="radio"/> N <input checked="" type="radio"/> Y
Create_view_priv	enum	--		<input type="radio"/> N <input checked="" type="radio"/> Y
Show_view_priv	enum	--		<input type="radio"/> N <input checked="" type="radio"/> Y
Create_routine_priv	enum	--		<input type="radio"/> N <input checked="" type="radio"/> Y
Alter_routine_priv	enum	--		<input type="radio"/> N <input checked="" type="radio"/> Y
Execute_priv	enum	--		<input type="radio"/> N <input checked="" type="radio"/> Y
Event_priv	enum	--		<input type="radio"/> N <input checked="" type="radio"/> Y
Trigger_priv	enum	--		<input checked="" type="radio"/> N <input type="radio"/> Y

phpMyAdmin페이지에 재 접속 후 User를 누르고 맨 아래에 reload the privileges 를 눌러준다.

Navigation bar: Databases, SQL, Status, **Users**, Export, Import, Settings, More

USERS OVERVIEW

User	Host	Password	Global privileges	User group	Grant	Action
<input type="checkbox"/> debian-sys-maint	localhost	Yes	ALL PRIVILEGES		Yes	Edit Privileges Export
<input type="checkbox"/> phpmyadmin	localhost	Yes	USAGE		No	Edit Privileges Export
<input type="checkbox"/> root	127.0.0.1	Yes	ALL PRIVILEGES		Yes	Edit Privileges Export
<input type="checkbox"/> root	:::1	Yes	ALL PRIVILEGES		Yes	Edit Privileges Export
<input type="checkbox"/> root	ca	Yes	ALL PRIVILEGES		Yes	Edit Privileges Export
<input type="checkbox"/> root	localhost	Yes	ALL PRIVILEGES		Yes	Edit Privileges Export
<input type="checkbox"/> roundcube	localhost	Yes	USAGE		No	Edit Privileges Export

↑ ☐ Check All With selected: Export

Add user

Remove selected users

(Revoke all active privileges from the users and delete them afterwards.)
☐ Drop the databases that have the same names as the users.

Go

⚠ Note: phpMyAdmin gets the users' privileges directly from MySQL's privilege tables. The content of these tables may differ from the privileges the server uses, if they have been changed manually. In this case, you should **reload the privileges** before you continue.

<https://mail.dreaminfo.org/installer/> 에 접속해서 NOT AVAILABLE을 제외한 ok문자가 있으면 다음 설정으로 넘어간다.

Roundcube Webmail Installer

1. Check environment

2. Create config

3. Test config

Checking PHP version

Version: **OK** (PHP 5.6.29-0+deb8u1 detected)

Checking PHP extensions

The following modules/extensions are *required* to run Roundcube:

PCRE: **OK**
DOM: **OK**
Session: **OK**
XML: **OK**
JSON: **OK**
PDO: **OK**
Multibyte: **OK**
OpenSSL: **OK**

The next couple of extensions are *optional* and recommended to get the best performance:

Fileinfo: **OK**
Libiconv: **OK**
Intl: **NOT AVAILABLE** (See <http://www.php.net/manual/en/book.intl.php>)
Exif: **OK**
LDAP: **NOT AVAILABLE** (See <http://www.php.net/manual/en/book.ldap.php>)

DB설정이다. 아까 앞에서 설정해준 password와 DB이름을 넣어준다.

Database setup

db_dsnw

Database settings for read/write operations:

MySQL ▾	Database type
localhost	Database server (omit for sqlite)
roundcube	Database name (use absolute
roundcube	Database user name (needs wi
Pa\$\$word	Database password (omit for s

db_prefix

IMAP 설정

IMAP Settings

default_host

The IMAP host(s) chosen to perform the log-in

mail.worldsign.org

 add

Leave blank to show a textbox at login. To use SSL/IMAPS connection, type ssl://host

default_port

143

TCP port used for IMAP connections

username_domain

Automatically add this domain to user names for login

Only for IMAP servers that require full e-mail addresses for login

auto_create_user

☒ Automatically create a new Roundcube user when log-in the first time

#SMTP 설정

SMTP Settings

smtp_server

mail.worldsign.org

Use this host for sending mails

To use SSL connection, set ssl://smtp.host.com. If left blank, the PHP mail() function is

smtp_port

25

SMTP port (default is 25; 465 for SSL; 587 for submission)

smtp_user/smtp_pass

%u

%p

SMTP username and password (if required)

☒ Use the current IMAP username and password for SMTP authentication

Roundcube 언어 설정

Display settings & user prefs

Language *

ko_KR

The default locale setting. This also defines the language of the login screen.
Leave it empty to auto-detect the user agent language.

Enter a [RFC1766](#) formatted language name. Examples: en_US, de_DE, de_CH, fr_FR, pt

Create Config

Roundcube Webmail Installer

1. Check environment

2. Create config

3. Test config

Check config file

defaults.inc.php: OK

config.inc.php: OK

Check if directories are writable

Roundcube may need to write/save files into these directories

/var/www/roundcube/temp/: OK

/var/www/roundcube/logs/: OK

Check DB config

DSN (write): OK

DB Schema: OK

DB Write: OK

DB Time: OK

Test SMTP config

Server: mail.worldsign.org

Port: 25

User: (none)

Password: ●●●●●●●●

Sender user03@worldsign.org

Recipient user04@worldsign.org

Send test mail

Test IMAP config

Server mail.worldsign.org ▼

Port 143

Username user03

Password ●●●●●●●●

Check login

만약 Test SMTP 부분에서 위 사진처럼 User:none이 아닌, 유저이름을 입력할 수 있으면 안된다. 만약 있다면 /var/www/roundcube/config/config.inc.php에서
\$config['smtp_user'] = '%u'; 를
\$config['smtp_user'] = ''; 로 변경한 다음에 페이지를 새로 고침 하면 위 사진처럼 유저이름을 물어보지 않는다.

테스트에 문제가 없으면 <https://mail.worldsign.org>에 접속하면 라운드큐브 웹 메일 페이지가 출력된다.

Roundcube Webmail :...

<https://mail.worldsign.org>
검색

roundcube

사용자명

암호

로그인

https://mail.worldsign.org/?_task=mail&_mbox=INBOX
검색

roundcube

user03@mail.worldsign.org

로그아웃

메일

주소록

설정

새로 고침

작성

회신

전체 회신

전달

삭제

표지

더 보기

모두

Q

받은 편지함

4

임시 보관함

보낸 편지함

스팸 편지함

지운 편지함

Sent

제목

보내는 사람

날짜

크기

• as

★ user40

2017-03-25 18:44

928 B

• ji

★ user40

2017-03-25 18:43

926 B

• asdf

★ user40

2017-03-25 18:33

930 B

• hihl

★ user04

금 21:40

645 B

• (제목 없음)

user02@mail.worldsign.org

목 16:50

396 B