# Virtual Machine daloRADIUS ADMINISTRATOR GUIDE

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Introductory to daloRADIUS

daloRADIUS is an advanced RADIUS web platform aimed at managing hotspots and general-purpose ISP deployments. It features user management, graphical reporting, accounting, a billing engine and integrates with GoogleMaps for geo-locating.

daloRADIUS is a web platform written in PHP, HTML, CSS and JavaScript and utilizes a database abstraction layer which means, in theory it should support many database systems, although in practice daloRADIUS queries are mostly MySQL specific (although there are patches for PostgreSQL support).

It is based on a FreeRADIUS deployment with a database server serving as the backend. Among other features it implements operator ACLs, GoogleMaps integration for locating hotspots/access points visually and many more features.

daloRADIUS is essentially a web platform to manage a radius server so theoretically it can manage any radius server but specifically it manages FreeRADIUS and it’s database structure. As a web application, daloRADIUS acts as a management console to control all aspects of a RADIUS server as well as providing extended commercial and professional features such as Accounting[1] information, graphical reports, a Billing[2] engine and built-in integration for GoogleMaps[3] service for geo-locating NAS servers and HotSpots centers.

Introductory to daloRADIUS Virtual Machine

The virtual machine appliance is based on Turnkey[4] virtual machine. In specific, it is based on the LAMP edition, running the entire web application framework based on Ubuntu 10.04.1 LTS (Long Term Support).

The benefits of using the virtual appliance (and turnkey in particular):

1. It has a smaller footprint

2. Easily scale-able and manageable as a virtual machine that may be migrated to other servers or cloned. Backup and restore procedures are easy and flexible due to the support of snapshots.

3. All components[5] related to daloRADIUS are pre-installed and pre-configured and may only require a small amount of tweaking and configuration to be customized to your own hotspot deployment and network infrastructure.

[1] Accounting records are dependent upon the RADIUS server's accounting functionality and the NAS to send accounting packets.
[2] The billing engine is still very much in it's early stages and provides a mere basic billing functionality.
[3] The Geo-locating service depends upon an Internet connection as it is provided by the GoogleMaps service and is also subject to Google's terms of usage.
[5] FreeRADIUS, LAMP setup, daloRADIUS and it's contributed scripts, portal pages, etc.
Audience

Individuals or businesses that wish not to concern themselves with the installation and deployment of a full scale RADIUS or daloRADIUS solution may find this virtual appliance suitable as it provides a relatively plug-n-play solution with minor modifications for businesses to apply. It is a great tool to quickly evaluate the software and servers installed.

The virtual machine may also be a good candidate for demo purposes.

Security Notice

daloRADIUS doesn't implement good security measures to avoid attacks such as XSS, CSRF or SQL Injections and as such deployments should implement extra security measures such as password protected directory access to the web application and consider providing access to the web application only to trusted staff.

Due to the above statement the /daloradius and / daloradius-users directories in the virtual machine are protected by a web server's authentication method, requiring username and password to open up the daloRADIUS platform.

Moreover, other software such as phpmyadmin, a web shell and a webmin administration console are also installed and available and access to them should be denied (or restricted) to anyone outside your private network. The server stack itself may also you to take precautions to secure the server.

Legal Notice

daloRADIUS is licensed under GNU's General Public License, version 2, which is available online at http://www.gnu.org/licenses/gpl-2.0.html

daloRADIUS, being an open source project, comes with no official warranty or support beyond community resources such as the mailing list, forums, documentation, etc.
Configuration

The server has been pre-installed with many software components such as a database server, the radius server, dalorADIUS etc. This chapter will cover all the related software and their relevant configuration items.
Server Configuration

Upon booting the virtual machine will issue a DHCP request for an IP Address. Once the system has completed booting up it will present a dialog screen representing all of the services that are up and their addresses for logging in (web page, IP address it received, etc).

Shell root Account:
- Username: root
- Password: daloradius

Image: daloRADIUS Virtual Machine boot-up display
FreeRADIUS

Software version installed is FreeRADIUS version 2.1.10, from source. The source code, patched with sql counters support and it's binaries build may be found at the directory /opt

Configuration directory: /etc/freeradius

Files that were replaced by daloRADIUS are:
1. /etc/freeradius/sql.conf
2. /etc/freeradius/radiusd.conf
3. /etc/freeradius/sql/mysql/counter.conf
4. /etc/freeradius/sites-available/default

Original files were kept in the same directory level with the suffix ".orig" which enables reverting back to stock configuration or diff'ing the change.

If changes are made to the MySQL user/pass for the radius database then it's required to also make this change in /etc/freeradius/sql.conf

Logs are located in: /var/log/freeradius/
MySQL

Software version installed is MySQL version 5.1, from the Ubuntu repository.

**Configuration directory:** `/etc/mysql`

**Root Account:**
- Username: root
- Password: daloradius

**RADIUS Account:**
- Username: radius
- Password: radius
- Database name: radius

**Logs are located in:** `/var/log/mysql/`
daloRADIUS

Software version installed is daloRADIUS 0.9-9 from svn repository.

daloRADIUS Management Platform

**Configuration directory:** /var/www/daloradius
**Configuration file:** /var/www/daloradius/library/daloradius.conf.php

**Website Access:** http://server-ip/daloradius/

If changes are made to the MySQL user/pass for the radius database then edit daloRADIUS configuration file and set the new connection information accordingly.

The following table describes the configurable options in the configuration file that you might need to change:

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<th>Description</th>
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<td>mysql</td>
<td>The database engine. Possible values: mysql</td>
</tr>
<tr>
<td>CONFIG_DB_HOST</td>
<td>127.0.0.1</td>
<td>IP Address or Host name of the MySQL database Server</td>
</tr>
<tr>
<td>CONFIG_DB_PORT</td>
<td>3306</td>
<td>The database engine port</td>
</tr>
<tr>
<td>CONFIG_DB_USER</td>
<td>root</td>
<td>Database's username</td>
</tr>
<tr>
<td>CONFIG_DB_PASS</td>
<td>root</td>
<td>Database's password</td>
</tr>
<tr>
<td>CONFIG_DB_NAME</td>
<td>radius</td>
<td>Database name</td>
</tr>
<tr>
<td>CONFIG_MAIL_SMTPADDR</td>
<td>127.0.0.1</td>
<td>SMTP mail server</td>
</tr>
<tr>
<td>CONFIG_MAIL_SMTPPORT</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>CONFIG_MAIL_SMTPFROM</td>
<td><a href="mailto:daloradius@daloradius.com">daloradius@daloradius.com</a></td>
<td>SMTP mail from address</td>
</tr>
<tr>
<td>CONFIG_DASHBOARD_DALO_SECRETKEY</td>
<td>sillykey</td>
<td>Heartbeat script's secret key</td>
</tr>
<tr>
<td>CONFIG_DASHBOARD_DALO_DELAYSOFT</td>
<td>5</td>
<td>Heartbeat's script soft delay</td>
</tr>
<tr>
<td>CONFIG_DASHBOARD_DALO_DELAYHARD</td>
<td>15</td>
<td>Heartbeat's script hard delay</td>
</tr>
</tbody>
</table>
**daloRADIUS Web Auth:**
for use when a user/pass authentication dialog asks for login when opening up the daloRADIUS management interface.

- Username: admin
- Password: admin

To change the password for the admin user, perform the following:

```
# cd /var/www/daloradius/
# htpasswd -c .htpasswd admin
```

When prompted for the password, repeat it twice for verification.

To disable this authentication dialog rename, modify accordingly or completely remove the file `/var/www/daloradius/.htaccess`

**Admin Operator:**
for use when login-in to the web application.

- Username: administrator
- Password: radius

**Logs are located in:** /var/www/daloradius/logs/

**.htaccess**

daloRADIUS package comes with a .htaccess[1] file which is used with the Apache web server to configure access control to the daloRADIUS application.

There are 2 types of gaining access to the daloRADIUS application that can be configured – the first is by authenticating with username and password and the second is by access control based on matched IP addresses or ranges.

By default, the .htaccess does not require the user to validate with either username or password or match the IP access ranges though these should be enabled for added security so that the web application is not visible or accessible to anyone but you and your trusted operators staff.

- Even though daloRADIUS requires username and password of it’s own, there might be insecurities that the application exposes and should be treated with counter measures such as the Apache authentication requirement

The .htaccess also covers access to the **heartbeat.php** script via IP ranges only and that is due to the fact that NASes (or any other type of nodes) which are reporting to daloRADIUS via the Heartbeat mechanism are doing it based on HTTP GET requests on port 80 and without expecting to perform an authentication process, hence for this script only access is granted based on IP ranges which the NASes belong to.

daloRADIUS Users Platform

**Configuration directory:** /var/www/daloradius-users
**Configuration file:** /var/www/daloradius-users/library/daloradius.conf.php

**Website Access:** http://server-ip/daloradius-users/

If changes are made to the MySQL user/pass for the radius database then edit daloRADIUS configuration file and set the new connection information accordingly.
Portal

The following describes the configuration related to the captive portal pages as well as the free signup and paypal signup pages.

Captive Portal Pages

The captive portal landing pages are based on the original Chillispot's contributed captive portal pages though they have been much altered by separating them into a template-like structure, allowing flexibility in making changes to their look & feel.

**Captive Portal directory:** /var/www/portal/hotspotlogin
**Configuration file:** /var/www/portal/hotspotlogin/hotspotlogin.php
**Website Access / UAM Server:** http://server-ip/portal/hotspotlogin/hotspotlogin.php

It is required to edit the configuration file and replace the $uamsecret PHP variable holding the UAM Secret value from it's current default value "enginx" to whatever is set in your Chillispot's or CoovaChilli's NAS for the UAM Secret value.
Free Signup Pages

The free signup web pages provide an interface for freely signing up for your users. As such, it is possible to define a profile which the users will be assigned to automatically when being created, therefore it is possible to limit these free users to a certain bandwidth, data transfer or session time.

**Captive Portal directory:** /var/www/portal/signup-free
**Configuration file:** /var/www/portal/signup-free/library/daloradius.conf.php

**Website Access:** [http://server-ip/portal/signup-free/](http://server-ip/portal/signup-free/)

If changes are made to the MySQL user/pass for the radius database then edit dalORADIUS configuration file and set the new connection information accordingly.

The following table describes the configurable options in the configuration file that you might need to change:

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<tr>
<td>CONFIG_DB_PASS</td>
<td>root</td>
<td>Database's password</td>
</tr>
<tr>
<td>CONFIG_DB_NAME</td>
<td>radius</td>
<td>Database name</td>
</tr>
<tr>
<td>CONFIG_GROUP_NAME</td>
<td>somegroup</td>
<td>The group/profile the free user will be associated with</td>
</tr>
<tr>
<td>CONFIG_USERNAME_PREFIX</td>
<td>GST_</td>
<td>The prefix to append to the username</td>
</tr>
<tr>
<td>CONFIG_USERNAME_LENGTH</td>
<td>4</td>
<td>Created username length</td>
</tr>
<tr>
<td>CONFIG_PASSWORD_LENGTH</td>
<td>4</td>
<td>Created password length</td>
</tr>
<tr>
<td>CONFIG_SIGNUP_SUCCESS_MSG_LOGIN_LINK</td>
<td>...</td>
<td>The success message with a link to the login page.</td>
</tr>
</tbody>
</table>
PayPal Signup Pages

The PayPal sign up pages are closely associated with daloRADIUS’s billing engine and plans setup. These pages provide online registration with payment being made to your PayPal business account, resulting in the user given a valid account immediately for the plan he chose to buy.

**Captive Portal directory:** /var/www/portal/signup-paypal  
**Configuration file:** /var/www/portal/signup-paypal/library/daloradius.conf.php

**Website Access:** http://server-ip/portal/signup-paypal/

If changes are made to the MySQL user/pass for the radius database then edit daloRADIUS configuration file and set the new connection information accordingly.

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</tr>
<tr>
<td>CONFIG_DB_PASS</td>
<td>root</td>
<td>Database's password</td>
</tr>
<tr>
<td>CONFIG_DB_NAME</td>
<td>radius</td>
<td>Database name</td>
</tr>
<tr>
<td>CONFIG_MERCHANT_WEB_PAYMENT</td>
<td><a href="https://www.sandbox.paypal.com/cgi-bin/webscr">https://www.sandbox.paypal.com/cgi-bin/webscr</a></td>
<td>The PayPal web payment url. Remove the sandbox from the URL for production systems.</td>
</tr>
<tr>
<td>CONFIG_MERCHANT_IPN_URL_ROOT</td>
<td><a href="https://portal.daloradius.com/portal/signup-paypal">https://portal.daloradius.com/portal/signup-paypal</a></td>
<td>The directory URL for the paypal sign up pages</td>
</tr>
<tr>
<td>CONFIG_MERCHANT_BUSINESS_ID</td>
<td><a href="mailto:liran.tal@gmail.com">liran.tal@gmail.com</a></td>
<td>The business ID which will be set as the recipient for payments</td>
</tr>
<tr>
<td>CONFIG_USERNAME_LENGTH</td>
<td>8</td>
<td>Created username length</td>
</tr>
<tr>
<td>CONFIG_PASSWORD_LENGTH</td>
<td>8</td>
<td>Created password length</td>
</tr>
</tbody>
</table>
Virtual Machine Management

The server's web home page provides a control panel with links to access the different tools available to the server's administrator or the hotspot owner.

This is the default page that is loaded and presented when the virtual machine IP address or hostname is accessed.

Image: Web Console

daloRADIUS Platform

<table>
<thead>
<tr>
<th>Control Panel</th>
</tr>
</thead>
</table>

- daloRADIUS Platform
- daloRADIUS Users
- Web Shell
- Webmin
- PHPMyAdmin

Commands

- FreeRADIUS restart

Server Resources and references

- Apache PHP information (to disable: rm /var/www/phpinfo.php)
- Apache server status (to disable: a2disconf status)
- TurnKey LAMP release notes

daloRADIUS Resources and references

- daloRADIUS SourceForge page
- daloRADIUS Help Forum (on SourceForge)
- daloRADIUS Bug Reporting (on SourceForge)
- daloRADIUS Blog
daloRADIUS Platform

Opens up the daloRADIUS Management interface for daloRADIUS administrators and operators.

Use the default administrator user's credentials to login to daloRADIUS:
Username: administrator
Password: radius

☐ The virtual machine has a default test user (username is daloradius), do not forget to remove this user in your production-deployed environment.

Image: daloRADIUS Platform
daloRADIUS Users

Opens up the daloRADIUS Users interface which is used for users created with daloRADIUS to login and overview their account settings. While this is not an interface an operator can login to, it is certainly possible to login with a user's portal login account to validate his accounting is working properly.

The virtual machine has a default test user, these are the credentials to test and login with
Username: daloradius
Password: daloradius

- Do not forget to remove this user in your production-deployed environment.

Image: daloRADIUS Users
Webshell

Opens up an interactive, web-based, shell console. This provides easy access to the system's shell interface without having to connect via SSH.

It is basically ssh over https, so you may login with any valid user in the system.

To login with the default install user use:
Username: root
Password: daloradius
Webmin

Opens up webmin, the web-based system management control panel. Webmin is a web application that provides server’s administrator with a management front-end to administer components of the server, such as the web server, the crontab schedule and more.

You may login with any valid user in the system.

To login with the default install user use:
Username: root
Password: daloradius
PHPMyAdmin

Opens up phpmyadmin, the web-based MySQL management interface. PHPMyAdmin provides a graphical interface to manage the database server, simplifying database administration operations or querying database tables.

Image: phpmyadmin platform

At the phpmyadmin login page you may use mysql's superuser root or the specific radius database user credentials:

**Root Account:**
- Username: root
- Password: daloradius

**RADIUS Account:**
- Username: radius
- Password: radius
- Database name: radius

Image: daloRADIUS Platform
Updating from SVN

The virtual machine server is installed with daloRADIUS’s 0.9-9 version based on the latest SVN revision.

Checking-out daloRADIUS code-base from SVN provides an easy upgrade path for fixes and improvements, thus staying up-to-date with the latest enhancements which are pushed in to SVN constantly.

Running an SVN update

Getting the latest SVN update, run the following commands

```
# cd /var/www/daloRADIUS
# svn update
```

You may also sync with the latest SVN updates for portal files as well as the daloRADIUS Users community.

```
# cd /var/www/portal/signup-paypal
# svn up

# cd /var/www/portal/signup-free
# svn up

# cd /var/www/portal/hotspotlogin
# svn up

# cd /var/www/daloradius-users
# svn up
```