



Virtual Machine daloRADIUS Administrator Guide Version 0.9-9

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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

[4] Turnkey Linux - <http://www.turnkeylinux.org/>

[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.

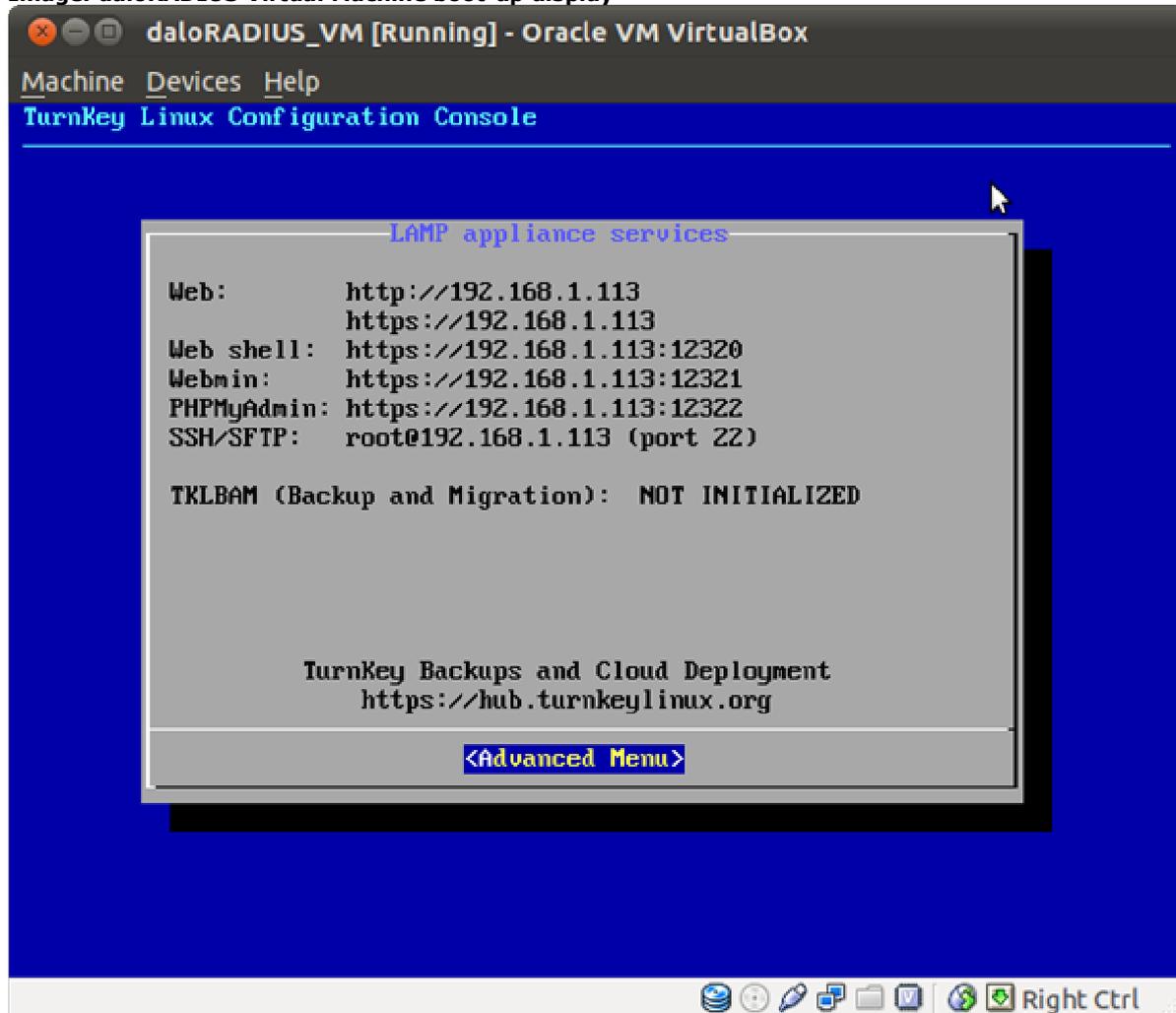
Server Configuration

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:

Configuration Option	Value (Default/Recommended)	Description
CONFIG_DB_ENGINE	mysql	The database engine. Possible values: mysql
CONFIG_DB_HOST	127.0.0.1	IP Address or Host name of the MySQL database Server
CONFIG_DB_PORT	3306	The database engine port
CONFIG_DB_USER	root	Database's username
CONFIG_DB_PASS	root	Database's password
CONFIG_DB_NAME	radius	Database name
CONFIG_MAIL_SMTPADDR	127.0.0.1	SMTP mail server
CONFIG_MAIL_SMTPPORT	25	
CONFIG_MAIL_SMTPFROM	daloradius@daloradius.com	SMTP mail from address
CONFIG_DASHBOARD_DALO_SECRETKEY	sillykey	Heartbeat script's secret key
CONFIG_DASHBOARD_DALO_DELAYSOFT	5	Heartbeat's script soft delay
CONFIG_DASHBOARD_DALO_DELAYHARD	15	Heartbeat's script hard delay

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:

```
CODE # 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.

[1] `.htaccess` in Apache's wiki: <http://wiki.apache.org/httpd/Htaccess>.

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 its 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, there-fore 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/*

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:

Configuration Option	Value (Default/Recommended)	Description
CONFIG_DB_ENGINE	mysql	The database engine. Possible values: mysql
CONFIG_DB_HOST	127.0.0.1	IP Address or Host name of the MySQL database Server
CONFIG_DB_PORT	3306	The database engine port
CONFIG_DB_USER	root	Database's username
CONFIG_DB_PASS	root	Database's password
CONFIG_DB_NAME	radius	Database name
CONFIG_GROUP_NAME	somegroup	The group/profile the free user will be associated with
CONFIG_USERNAME_PREFIX	GST_	The prefix to append to the username
CONFIG_USERNAME_LENGTH	4	Created username length
CONFIG_PASSWORD_LENGTH	4	Created password length
CONFIG_SIGNUP_SUCCESS_MSG_LOGIN_LINK	...	The success message with a link to the login page.

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.

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

Configuration Option	Value (Default/Recommended)	Description
CONFIG_DB_ENGINE	mysql	The database engine. Possible values: mysql
CONFIG_DB_HOST	127.0.0.1	IP Address or Host name of the MySQL database Server
CONFIG_DB_PORT	3306	The database engine port
CONFIG_DB_USER	root	Database's username
CONFIG_DB_PASS	root	Database's password
CONFIG_DB_NAME	radius	Database name
CONFIG_MERCHANT_WEB_PAYMENT	https://www.sandbox.paypal.com/cgi-bin/webscr	The PayPal web payment url. Remove the sandbox from the URL for production systems.
CONFIG_MERCHANT_IPN_URL_ROOT	https://portal.daloradius.com/portal/signup-paypal	The directory URL for the paypal sign up pages
CONFIG_MERCHANT_BUSINESS_ID	liran.tal@gmail.com	The business ID which will be set as the recipient for payments
CONFIG_USERNAME_LENGTH	8	Created username length
CONFIG_PASSWORD_LENGTH	8	Created password length

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](#)

Control Panel


dalo
RADIUS
daloRADIUS
Platform


dalo
RADIUS
daloRADIUS
Users


Web Shell


Webmin


PHPMyAdmin

Commands

-

Server Resources and references

- [Apache PHP information](#) (to disable: `rm /var/www/phpinfo.php`)
- [Apache server status](#) (to disable: `a2dismod 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.

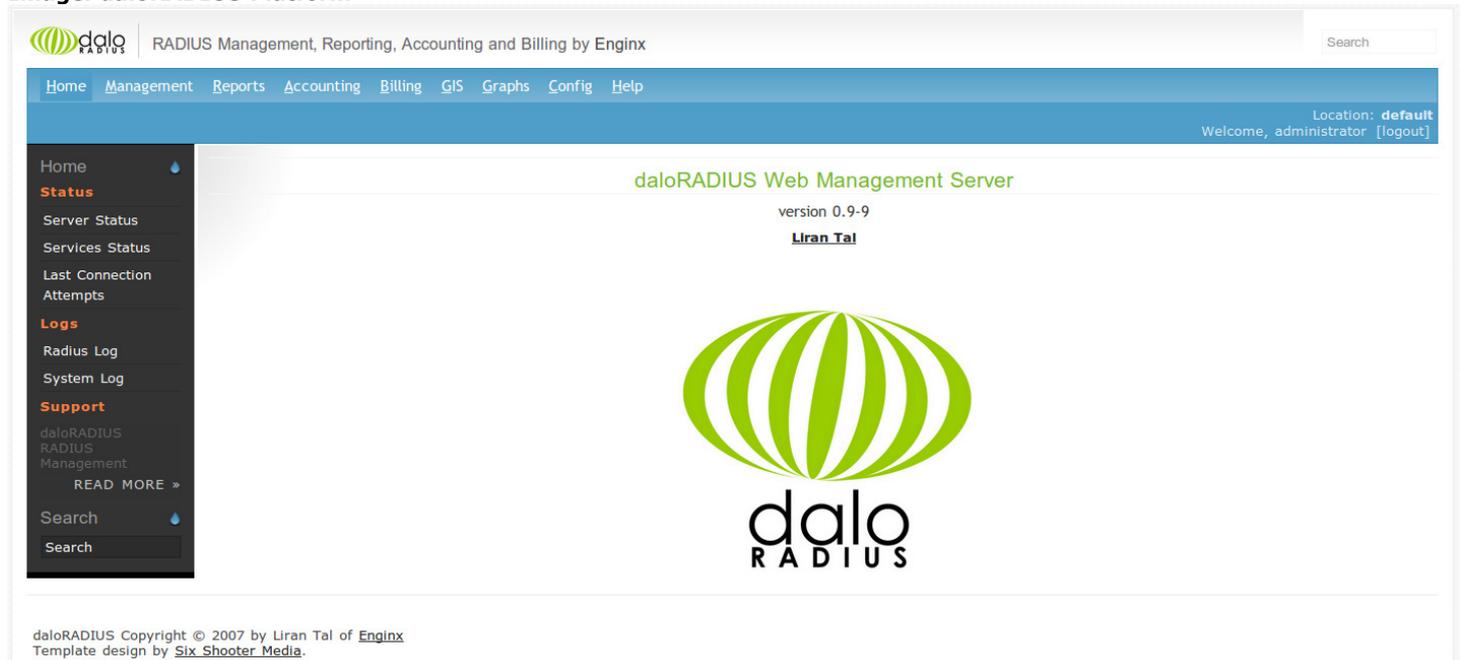
Use the default administrator user's credentials to login to daloRADIUS:

Username: administrator

Password: radius

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

Image: daloRADIUS Platform



The screenshot displays the daloRADIUS Web Management Server interface. At the top, the header includes the daloRADIUS logo and the text "RADIUS Management, Reporting, Accounting and Billing by Enginx". A search bar is located in the top right corner. Below the header is a navigation menu with links for Home, Management, Reports, Accounting, Billing, GIS, Graphs, Config, and Help. The main content area features the text "daloRADIUS Web Management Server" and "version 0.9-9" by "Liran Tal". A large green logo with the text "dalo RADIUS" is centered on the page. A sidebar on the left contains a menu with sections for Home, Status (Server Status, Services Status, Last Connection Attempts), Logs (Radius Log, System Log), Support, and a search bar. The footer contains copyright information: "daloRADIUS Copyright © 2007 by Liran Tal of Enginx. Template design by Six Shooter Media."

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

The screenshot displays the daloRADIUS Userportal interface. At the top, there is a header with the daloRADIUS logo and the text "Radius Reporting, Billing and Management by Enginx". A search bar is located in the top right corner. Below the header is a navigation bar with links for Home, Preferences, Accounting, Billing, and Graphs. A welcome message "Welcome, daloradius [logout]" is visible in the top right of the main content area.

The main content area is titled "daloRADIUS Userportal" and includes a "Welcome to the user Portal" message. Below this, there are two main sections:

PLAN INFORMATION

Item	Allowed by plan	Used	Remainning
Session Time	0 seconds	0 seconds	0 seconds
Session Download	unavailable B		
Session Upload	unavailable B		
Plan Name unavailable			
Plan Recurring Period unavailable			
Plan Time Type unavailable			
Plan Bandwidth Up			
Plan Bandwidth Down			

SUBSCRIPTION ANALYSIS

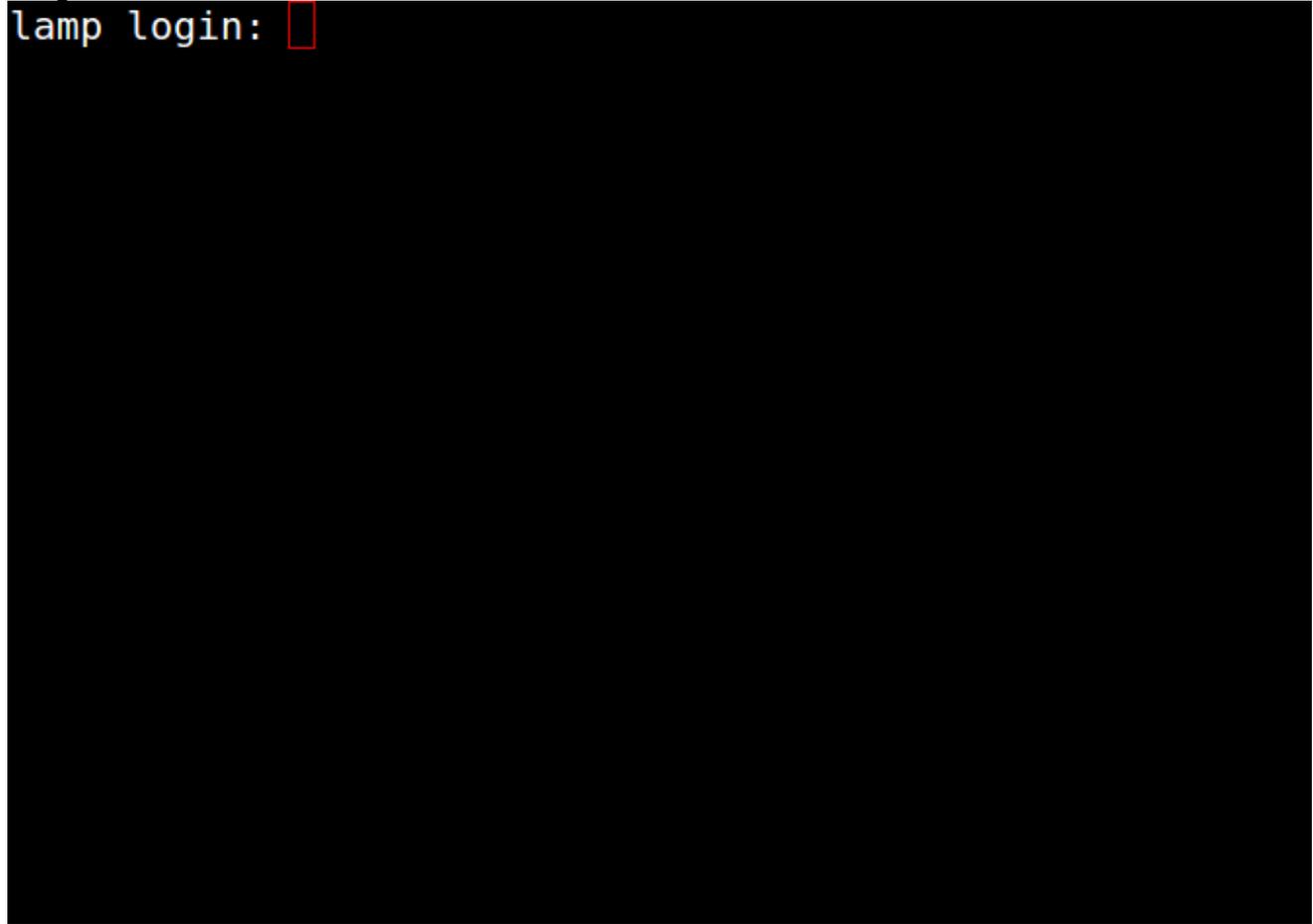
	Global	Monthly	Weekly	Daily
Session Limit				
Session Used	unavailable	unavailable	unavailable	unavailable
Session Download	unavailable	unavailable	unavailable	unavailable
Session Upload	unavailable	unavailable	unavailable	unavailable
Session Traffic (Up+Down)	unavailable	unavailable	unavailable	unavailable
Logins	0	0	0	0
Expiration unset				

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.

Image: Web Shell



```
lamp login: 
```

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.

Image: Webmin Login



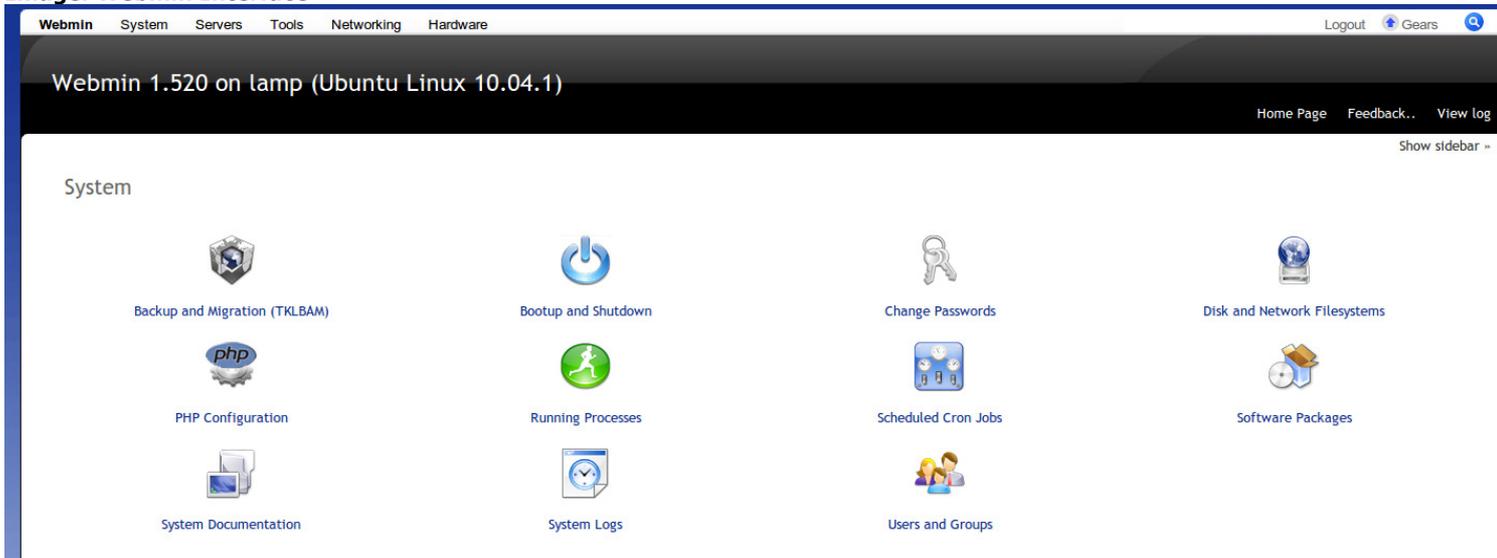
You may login with any valid user in the system.

To login with the default install user use:

Username: root

Password: daloradius

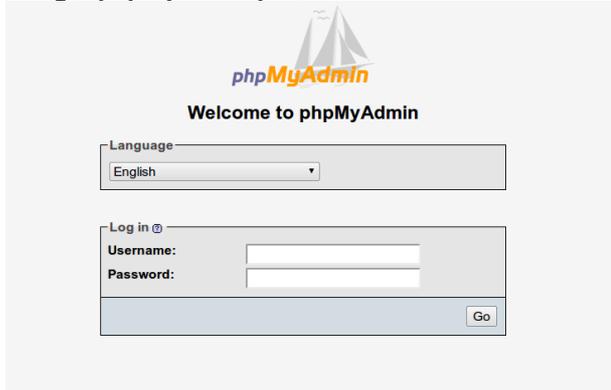
Image: Webmin Interface



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:

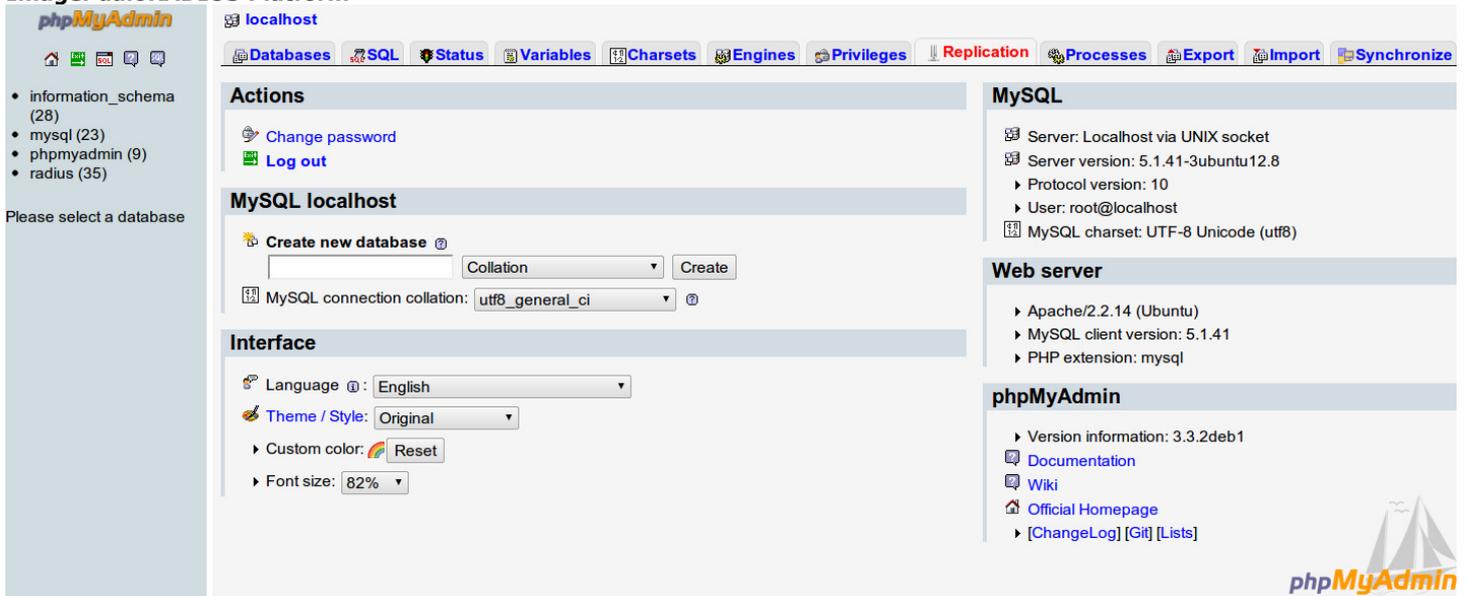
Root Account:

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

```
CODE # 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.

```
CODE # 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
```