Liftians
Server Setup Manual

Liftians Inc. v0.1

Scope

This document will begin as a rough outline of all the steps needed to properly deploy a Liftians Linux server. This is a living document that should be constantly updated as new knowledge is gained. One day (soon) it will be a comprehensive and a simple step by step guide. This server will run BotService software and hold the necessary databases to be set up for 24/7 on-premises operation. It's possible to setup a Linux server many ways, this document is not gospel. However, to be helpful, simplify deployments, and speed up the steps involved, this guide should generally be followed.

Document Revisions

Version	Author	Date	Changes
v0.1	Nick Baker	1/31/2022	First draft
V1.0	Jonathan Huang	2/12/2023	V1.0

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1 Hardware Selection

1.1. Vendor Selection

Choose a USA based vendor for quality and ease of warranty RMA.

- Dell PowerEdge
- HP ProLiant ML110
- Lenovo ThinkServer

1.2. Hardware Selection

We need a good amount of CPU cores with lots of threads (general rule of thumb: the more the better). Should have at least 32GB of RAM (aim for 64GB) and a fast NVMe drive to boot from and host all the necessary bot files and services. *(note: NVMe based SSDs are not generally offered on servers, only SATA 6G)*

Depending on the customer, they might have an IT closet with rack space for our server. There are 1U, 2U, and 4U rack mount servers and alternatively there are 4U and 5U tower servers (that don't *need* a rack). Rack mountable tower servers might be the ideal on size fits all solution. We can have a standard server that can be rack mountable or not. Usually, 4U towers take up 5U of space on a rack.

2 OS Selection and Installation

2.1. OS Selection

Ubuntu is the OS of choice at Liftians. Current LTS release of Ubuntu Server is 20.04.3. Other Linux distributions should work however, we want to keep things consistent and simple to recreate and deploy.

https://ubuntu.com/download/server

2.2. OS Installation

Put OS on a bootable thumb drive for physical installation on server. Rufus is a simple utility for creating a bootable thumb drive using the .iso OS image. Other methods for creating a bootable drive exit, Rufus is just quick and easy. https://rufus.ie/en/

3 New User Setup

3.1. Setup a New User

- This user could be a superuser
- Create a "liftians" user on all server instances
- Same password liftians2!??

4 Necessary Packages / Dependencies

4.1. Install Packages

- Java
  - sudo add-apt-repository ppa:openjdk-r/ppa

- o sudo apt-get update
- o sudo apt install openjdk-11-jdk
  - MySQL
    - o User "liftians"
    - o liftians2!??
  - VPN – TBD
    - o PGYVPN for now

4.2. Install Liftians Software and Dependencies from Dev Environment

- Connect to VPN first
- SCP
- WMS
  - o Copy from SD1
  - o scp liftians@SD1.liftians.com:/home/liftians/wms/LatestVersion.tar.gz /home/liftians/wms
- BotService
  - o Copy from SD1
  - o scp liftians@SD1.liftians.com:/home/liftians/App_current/hollywoodfeed/botcoorinator-6.8-assembly.tar.gz /home/liftians/App_current/hollywoodfeed
- MapMonitor
  - o In Windows
- MySQL Database Structure
  - o MySQL Workbench backup and restore (use command line)
  - o Liftman and WMS databases
- SSH custom login motd
  - o Neofetch saved config and ascii image need to be imported

5 Configure Networking

5.1. Port forwarding for 22 and 3306 (SSH and MySQL)

Log into router and set IP reservation for 192.168.1.2 for the server and forward 22 to it

6 Optimize Security

6.1. Close Ports

Shut down ports that will not be used

6.2. Uninstall Unused Packages

- FTP, telnet, etc.

6.3.   Remove unnecessary users

7 Setup Automatic Backups

7.1.   Backup Scheme

- Server should be backed up every night
- Watchdog for when server goes down the backup can come online

8 Glossary / Linux Commands (see Linux Commands doc for more)

8.1.   Alphabetical List of Common Linux Commands

cd   "change directory" and, as its name suggests, switches you to the directory you're trying to access

ls   When invoked without any arguments, ls *lists the files* in the current working directory

pwd   "print working directory," outputs the absolute path of the directory you're in

rm   remove file or directory

mkdir   make directory

sudo   super user do