ROOM-HOUSE TOWER OWNER'S MANUAL

version 1.39 see in **HTML**

0 - INTRODUCTION

1 - INTRODUCTION

This is the Room-House Tower Owner's Manual. It is intended as a guide on how to operate the basics of Room-House Tower, as well as an introduction to some advanced features. It is organised into major sections as well as more detailed subsections and these are laid out in the **Table of Contents**. The first section deals with downloading, installing, and running Room-House Tower. The second section is an overview of configuring Room-House Tower. Reading those two sections is enough to get you started. The remaining sections cover more advanced features and further configuration options in greater depth.

RESOURCES

- **Room-House Homepage**
- **Telegram Official**
- **Twitter/X Official**
- **Explorer**
- **Explorer Legacy**
- **Subscan**
- **Support E-mail Address**

DEVELOPER RESOURCES

- **GitHub Repository**

2 - WHAT IS ROOM-HOUSE TOWER

Room-House Tower is a container implementation of Room-House which is a Free and Open Source (FOSS) software. Room-House Tower is designed with performance, configurability, and extensibility in mind. The server is written in Java, and there is an extensive layer in Javascript client browser code.

3 - HISTORY

Room-House was created in early 2021 by **kl3eo** as a replacement for the vanilla Kurento's team Java client/server sample app. It's designed with a purpose to be better performing and more configurable than the original sample app. It has since been run inside the **xTER SafeContainer** to make its deploy as easy as possible. Room-House inside an xTER makes up the basis for the Room-House Tower.

1 - INSTALLING

1 - REQUIREMENTS

For Windows, Linux or Mac, the same demand will apply, namely having a static (fixed) IP for the host that runs the Room-House in container. 6Gb RAM at least is required of the host as well as 2 Gb of free space specially for R-H files.

Room-House Tower is a Linux virtual machine that runs in VirtualBox (C) by Oracle. On Linux, macOS, Windows, you can simply install VirtualBox from Oracle's site **virtualbox.org**. No extension pack is required. The oldest tested version of VB to run Room-House is 6.1.22.

2 - SETTING UP VIRTUAL MACHINE

The simplest way is to use our setup scripts fow Windows (a) or Linux/macOS (b). Before running any of them, download the small boot file "loop_rh.vdi" from **github** . On Linux, place it to "/opt" folder where the script will find it. On Windows, take it to the new folder which is created by the script (see the code).

Start the graphics VirtualBox Manager to see the details. On Linux, make sure the "vboxdrv" driver is active with "service vboxdrv status" command.

LINUX/MACOS

On Linux or Mac, here is our script to create the virtual machine name "RH".

```
#!/bin/bash
mkdir -p ~/VB && cd ~/VB
if [ -f /opt/loop_rh.vdi ]; then
 cp -a /opt/loop_rh.vdi ./
else
 echo File /opt/loop_rh.vdi not found. Exiting
 exit
fi
vboxmanage createvm --name RH --ostype RedHat_64 --register --basefolder `pwd`
mv loop_rh.vdi RH/ && cd RH
PRI_IF=`/sbin/ip addr show | awk '/inet.*brd/{print $NF; exit}'`
vboxmanage modifyvm RH --memory 4096 --cpus 2 --audio none --firmware efi --nic1
bridged --nictype1 virtio --bridgeadapter1 $PRI_IF
vboxmanage createmedium --filename 3G.vdi --size 3072
vboxmanage storagectl RH --name SATA --add sata
vboxmanage storageattach RH --storagectl SATA --medium loop_rh.vdi --port 0 --type hdd
vboxmanage storageattach RH --storagectl SATA --medium 3G.vdi --port 1 --type hdd
```

```
vboxmanage modifyvm RH --boot1 disk --boot2 none --boot3 none --boot4 none
```

WINDOWS

If you prefer to run on Windows, here is our script for it - replace "Bob" with your Windows user's name, then please run each of nine commands one by one, #1..#9 to make sure every one is successful. If you encountered an error, remove the "RH" virtual machine in the graphics VirtualBox Manager, then start from the scratch. Also replace "Intel(R) Ethernet Connection I219-LM" in command #3 with your host's network adapter's name. You can learn what it is from the graphics VirtualBox Manager (see picture). Copy the adapter's name from there and paste it between the quotes after the --bridgeadapter1 flag where now it's "Intel(R) Ethernet Connection I219-LM".

```
1. vboxmanage createvm --name RH --ostype RedHat_64 --register --basefolder
"C:\Users\Bob\VMs"
2. cd "C:\Users\Bob\VMs\RH"
3. vboxmanage modifyvm RH --memory 4096 --cpus 2 --audio none --firmware efi --nic1
bridged --nictype1 virtio --bridgeadapter1 "Intel(R) Ethernet Connection I219-LM"
4. vboxmanage createmedium --filename 3G.vdi --size 3072
5. vboxmanage storagectl RH --name SATA --add sata
```

Now download "loop_rh.vdi" from github link above and place it to the same folder where you're running commands (it's "C:\Users\Bob\VMs\RH"), and proceed with command #6.

```
6. vboxmanage internalcommands sethduuid loop_rh.vdi
7. vboxmanage storageattach RH --storagectl SATA --medium loop_rh.vdi --port 0 --type
hdd
8. vboxmanage storageattach RH --storagectl SATA --medium 3G.vdi --port 1 --type hdd
9. vboxmanage modifyvm RH --boot1 disk --boot2 none --boot3 none --boot4 none
```

This process requires use of the command line. If you are not familiar with it, it is recommended that you get used to it first.

3 - STARTING TOWER

Once you have successfully created the "RH" virtual machine, click on the "Start" button in the graphics VirtualBox Manager's menu. Next, you will see the blue screen with 5 fields, where only first four fields are required. Fill these fields one by one:

1. Username - type "vg_11" 2. Password - type "aqua" 3. IP - type ANY free IP address from your local subnet. If your router is "192.168.0.1" and your host computer is "192.168.0.10", then may be "192.168.0.100" is free? You can try it. 4. Gateway - type "192.168.0.1" or "192.168.1.1" or whatever your local subnet router's internal IP is. 5. Leave it blank, it's not required now.

This process requires understanding your local subnet IP. If you are not familiar with it, it is recommended

that you consult your system administrator first.

Wait patiently and see what is going on, it may take some minutes to download, unpack and start all the software on your VM.

Once this process has finished, you will see the "login" prompt on the bottom line (see pictures).

DOWNLOADING..

..UNPACKING & STARTING SERVICES..

..COMPLETE

After the very first startup, until the Tower has been configured, the bottom line reads as "localhost login:" - you will change the Tower's name from "localhost" to its real name later. In this example pictures, the tower's name was already configured by us as "iron", and its internal IP had been chosen "192.168.88.202" by us, because our local subnet is "192.168.88.0/24".

2 - CONFIGURATION BASICS

1 - CONFIGURATION OVERVIEW

Room-House Tower can be configured by editing options in WebAdmin interface. Below is a list of WebAdmin menus:

SETTINGS
: The main configuration menu which contains server-wide configuration variables.

USERS
: Can add/edit/remove users with their passwords, and separately add/edit/remove Rooms. Also can bind a Room to a User which becomes its Master.

LOGS
: Some legacy logging is enabled on default.

INFO
: Allows you to tweak server processes.

When changing values in Settings, it's always necessary to "Save" the new values with a right column top button click.

2 - LOGIN & PASSWORD

Login allows different users to access different features in WebAdmin. Each login has its own permissions. Setting up user login is easily done via the WebAdmin. The Room-House Tower owner's login is "admin" and in Settings there is a way to change the admin's password. The Room-House Tower owner and admin are the same, the first thing the admin MUST DO is CHANGE THE DEFAULT ADMIN'S PASSWORD! Go to Settings menu, click on "change" next to "Admin key" and replace the default with some phrase, press Enter and then click on the astersik. Please write down the admin's new password which shows after clicking on the asterisk. After that, click on "Save" and re-login, testing your new admin password.

If you didn't write down your new admin's password and can't remember it, you will have to stop this virtual machine, then replace file "loop_rh.vdi" located in your VB folder with the same file from the github. Doing this, you lose all changes to the R-H configuration that you may have done so far. Restart your VM and change the default password again. Please be advised to lock your computer while going out, because one can change the admin's password replacing the current "loop_rh.vdi" with the default file! Anyone who has access to your computer may do so and then login to WebAdmin as you - to prevent this, lock your computer before leaving your place.

To access the WebAdmin the first time after the very first Tower startup, go to URL: "https://192.168.8.100:8443" - here we assume that "192.168.0.100" is the one IP you've chosen on the "blue screen" during the startup. Please disregard the browser warning or complaining about the wrong certificate, because you're accessing the internal local IP and not the fully qualified DNS name, while the certificate is good for the latter which you will be using after the configuration is complete. Enter "admin" into the top field, and "ed838432" into the password field. This is the default admin's password that you must change now. Please CHANGE the admin's password in the Settings menu as we have already urged you to do!

3 - SETTINGS

Change the "Host" to the Tower name, the one that you have received from us on condition of the lease. Then change the "External_IP" to the static IP of your router. Because you are using VirtualBox environment, there is no Wi-Fi on this system. Later you may also need other "Settings" options. Do save the changes you've made clicking the top button in the right column. Check if the URL "https://your_tower_name.room-house.com" is alive in the internet. It will eventually be, if not already, - first you'd have to do the correct "Port Forwarding". - Read the next Chapter of this Manual how to do it.

4 - PORT FORWARDING

To access Room-House from internet, TCP ports 443 and 8443 must be open. This is true when your host has a direct link to internet. However, in most cases it would sit behind the firewall of the router. This is why port forwarding is required. First, your router is proxied by the Room-House. From the proxy, web requests will be forwarded to the static IP of your router. And from the router, they will have to be forwarded to TCP ports 443 and 8443 on "192.168.0.100" which is what you've chosen on the "blue screen" during startup. So you will have to configure the "Port Forwarding" on your router. If the ports 443 and 8443 are not busy, just assign them to "192.168.0.100". But if they are busy, then assign ANY two TCP router ports, for example, 8943 and 8953, to be forwarded to TCP ports 443 and 8443 of the "192.168.0.100". Then **contact us** and tell us which ports of the router have been assigned (8943 and 8953, or other) so that we configure it on our proxy to do the correct forwarding of web requests to your router's ports.

Besides these two TCP ports, also you have to forward the range 1025-65535 of the UDP ports from the router to "192.168.0.100". NB: if working without domain names, e.g. no DNS available, forward TCP post

18443 and then accept browser's warning to open https://your_external_ip:18443

If you've found port forwarding difficult, as you probably must have, discuss these matters with your system administrator.

5 - USERS & ROOMS

By default, the Room-House Tower has no users or rooms. To have them added, the WebAdmin allows to be configured properly. A typical Users configuration looks like this (Table 1):

In the example above, "Ronnie" can login to the WebAdmin by typing ***58*** as his login and the password ***493266***. In the same time, "Ronnie" can enter the locked main Room of the Tower "club" (https://club.room-house.com) by typing ***58493266*** right after the captcha.

The Tower owner creates/edits/removes users with access to the main Room (https://tower_name.room-house.com). That is, when the main Room of the Tower is locked, "normal" users must have an ID and a password to access it; however, the Tower can assign an Apart/Office to a User, by selecting "Owner" from the right table column. This User becomes the "owner" (or the "master") of selected Apart/Office, and he can create other users with access to it. So there are two types of users that the Tower owner creates: 1. normal users who have access to the main Room when it's locked 2. those assigned to be masters of Aparts or Offices who can create other users with access to their property. This is simple to understand, for example, the Tower gives the key to the Office Manager and the Manager makes keys for every staff member.

When users are assigned to own an Apart or Office, they aren't shown in the Table 1 any more; so that it's not possible to see or change their password or assignment, or even remove them altogether. This is a security measure to protect the Apart or Office owner/master and their office staff (or their family) from any trouble that may occur, like being accidentally deleted from the Table 1 or having a password stolen by an intruder. This is why assigning a user to be the owner/master of an Apart/Office, the Tower owner is asked HARD way to write down the ID and password of the user being assigned, for reason that it's not possible to see them again after the assignment has been done.

The Tower owner creates 1-room Aparts or Offices in the "Rooms" section (see Table 2). Assigning this Apart or Office to a User in Table 1 makes it "immutable" - it cannot be renamed or deleted. Again, this is a protective measure because normally assigning ownership is a result of a purchase, so Apart/Office ownership rights must be guaranteed by the Tower and protected against unauthorized or accidental changes.

It is of course possible to have more rooms than only one in any Apart or Office, but currently the Tower's owner has to ask Room-House to have it done.

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