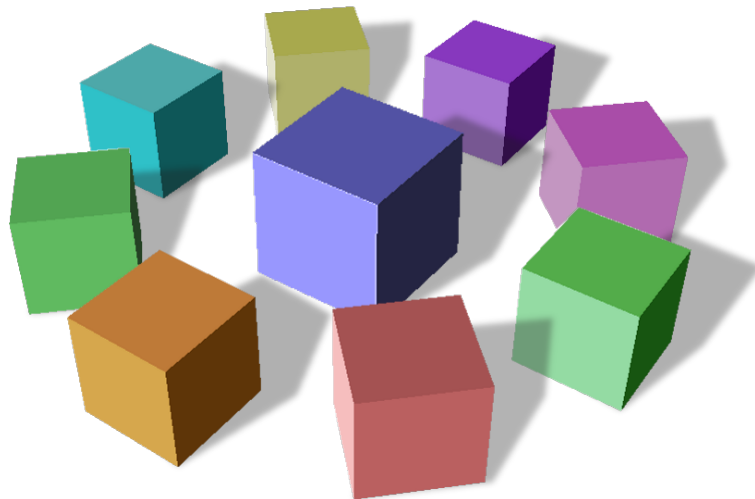


RemoteBox

Version 1.5

Open Source VirtualBox Client with Remote Management



Documentation

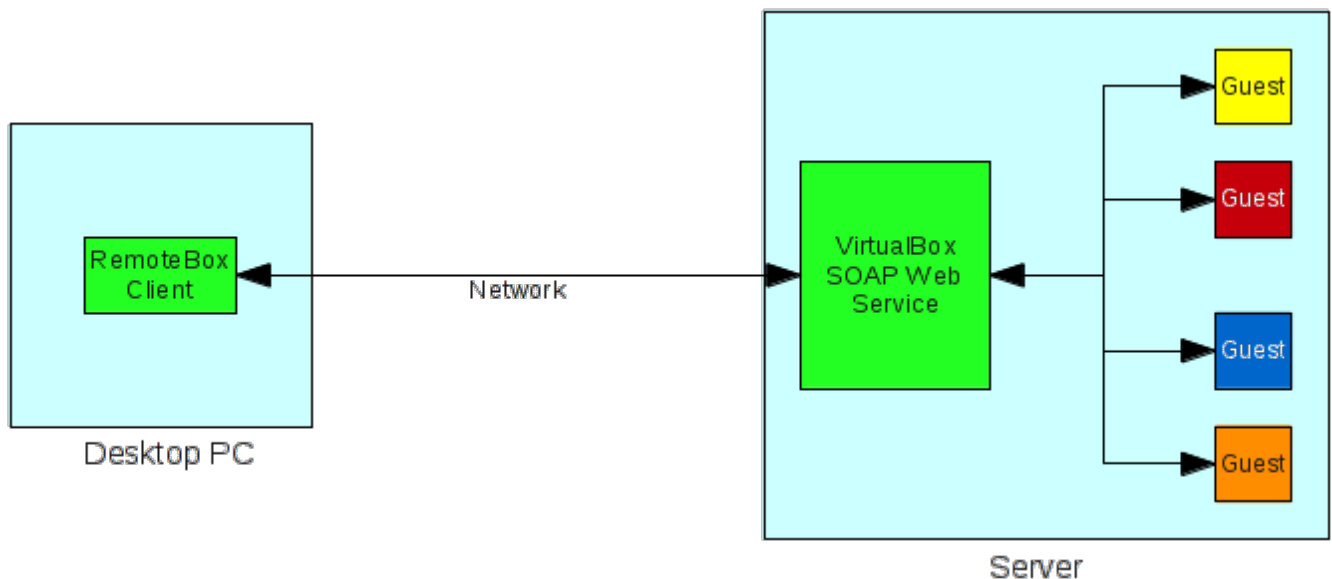
Table of Contents

1 Introduction.....	4
2 RemoteBox Requirements.....	4
2.1 Fedora.....	4
2.2 Mandriva / Mageia.....	5
2.3 OpenSUSE.....	5
2.4 Ubuntu / Mint.....	5
2.5 Mac OS X.....	5
2.6 NetBSD.....	5
2.7 FreeBSD.....	6
2.8 Solaris / OpenSolaris / OpenIndiana.....	6
3 RemoteBox Installation.....	6
4 Configuring the Server.....	6
4.1 Linux Server Configuration.....	7
4.1.1 The VirtualBox Web Service.....	7
4.1.2 SSL for the VirtualBox Web Service.....	8
4.2 Windows Server Configuration.....	9
4.2.1 The VirtualBox Web Service.....	9
4.3 Solaris Server Configuration.....	9
4.3.1 The VirtualBox Web Service.....	9
4.4 Mac OS X Server Configuration.....	10
4.4.1 The VirtualBox Web Service.....	10
4.5 Disabling Web Service Authentication.....	10
5 Using RemoteBox.....	11
5.1 RemoteBox Preferences.....	11
5.1.1 RDP Client.....	11
5.1.2 Auto Open Guest's Display on Guest Start.....	11
5.1.3 Enable Heartbeat.....	11
5.1.4 Default Stop Action.....	11
5.2 Connecting to Server.....	12
5.2.1 URL.....	12
5.2.2 Username.....	12
5.2.3 Password.....	12
5.3 The Main Window.....	12
5.4 Remote Display.....	12
5.5 Remote Display with Sound.....	13
5.6 Creating New Guests.....	13
5.7 Virtual Media Manager.....	13
5.8 Installing Guest Additions.....	13
5.9 Hot Plugging and Unplugging vCPUs.....	14
6 FAQ & Troubleshooting.....	14
6.1.1 Does RemoteBox need to be running on the same operating system as VirtualBox?.....	14
6.1.2 Can I use RemoteBox to administer VirtualBox on the same machine?.....	14
6.1.3 Does RemoteBox run on Windows?.....	14
6.1.4 Does RemoteBox run on my favourite flavour of 'UNIX'?.....	15
6.1.5 How can I force set the remote display size for the guest?.....	15
6.1.6 Can I convert a hard disk image to another format?.....	15
6.1.7 Why is RemoteBox restricted to certain versions of VirtualBox?.....	15
6.1.8 Why are the mouse pointers are out of sync when using the Remote Display?.....	15
6.1.9 When I try to open the manual in RemoteBox, nothing is displayed.....	15
6.1.10 I run VirtualBox 4.1.X, what version of RemoteBox is required?.....	15
6.1.11 I run VirtualBox 4.0.X, what version of RemoteBox is required?.....	15
6.1.12 I run VirtualBox 3.2.X, what version of RemoteBox is required?.....	15

6.1.13 I run VirtualBox 3.1.X or earlier, what version of RemoteBox is required?.....	16
6.1.14 I have a version of GTK older than 2.22. Can I still use RemoteBox?.....	16
6.1.15 I get an error message similar to the following:.....	16
6.1.16 I get an error message on the command line similar to the following "Incorrect parameter at <path>/SOAP/Lite.pm" line xxxx". What can I do?.....	16
6.1.17 I repeatedly get disconnected from the server, what's wrong?.....	16
6.1.18 What is the default port that the VirtualBox web service runs on?.....	16
7 Licence.....	17
8 Disclaimer.....	17
9 Contact.....	17

1 Introduction

VirtualBox is traditionally considered to be a virtualisation solution aimed at the desktop as opposed to other solutions such as KVM, Xen and VMWare ESX which are considered more server orientated solutions. Whilst it is certainly possible to install VirtualBox on a server, it offers few remote management features beyond using the `vboxmanage` command line. RemoteBox aims to fill this gap by providing a graphical VirtualBox client which is able to communicate with and manage a VirtualBox server installation. RemoteBox achieves this by using the `vboxwebsrv` feature of VirtualBox that allows its API to be accessed using a protocol called SOAP, even across a network. RemoteBox is very similar in look and feel to the native VirtualBox interface and allows you to perform most of the same tasks, including accessing the display of guests – completely remotely. In addition, because both VirtualBox and RemoteBox are supported on many platforms you can for example manage a VirtualBox instance running on a Windows server using the RemoteBox client installed on Linux or FreeBSD.



2 RemoteBox Requirements

This section provides an overview of the general requirements of RemoteBox. Additional information specific to your operating system or distribution may be found below.

- Perl v5.8 or newer is recommended
- gtk2-perl v1.203 or newer is recommended (must be built against Gtk2 v2.22 or newer)
- SOAP::Lite perl module v0.710.10 or newer is recommended.
- An RDP client if you want to connect to the remote display of guests. The `rdesktop` client is recommended.
- VirtualBox 4.2.x installed on the server
- The Oracle Extension Pack should also be installed on the server. The pack may be obtained from <http://www.virtualbox.org/wiki/Downloads> Follow the instructions on the page to install them.

2.1 Fedora

Use your preferred package management tool to ensure the correct RPM packages are installed. For example, running `yum` as the root user:

```
yum -y install perl-Gtk2 perl-SOAP-Lite rdesktop
```

2.2 Mandriva / Mageia

Use your preferred package management tool to ensure the correct RPM packages are installed. For example, running urpmi as the root user:

```
urpmi perl-Gtk2 perl-SOAP-Lite rdesktop
```

Warning: Unfortunately, Mandriva seems to ship unstable beta versions of Perl-Gtk2 which can cause RemoteBox to behave or fail in unusual ways. For this reason, bug reports will not be accepted if you're running Mandriva, unless they can be reproduced on another stable distribution.

2.3 OpenSUSE

Use your preferred package management tool to ensure the correct RPM packages are installed. For example, running zypper as the root user:

```
zypper install perl-Gtk2 perl-SOAP-Lite rdesktop
```

2.4 Ubuntu / Mint

Use your preferred package management tool to ensure the correct DEB packages are installed. For example, running apt-get:

```
sudo apt-get install libgtk2-perl libsoap-lite-perl rdesktop
```

2.5 Mac OS X

Mac OS X typically does not come with the vast majority of dependencies for running complex UNIX graphical apps, so usually a 3rd party repository system is required. MacPorts (<http://www.macports.org>) is known to provide everything you need to get RemoteBox up and running. Follow the instructions on the MacPorts web site to get it installed and configured. The rest of these instructions will assume MacPorts is correctly installed.

You will also need to ensure that the X11 and XCode packages are installed on your Mac. If not, they can be found on your operating system DVD or downloaded free from the Apple store.

Install the required MacPorts as follows:

```
sudo port install p5-gtk2 p5-soap-lite rdesktop
```

Important: You will need to modify the very first line in the `remotebox` file so that it uses the MacPorts implementation of Perl. Open the file in a text editor and replace the first line as follows:

```
#!/usr/bin/perl
```

replace with

```
#!/opt/local/bin/perl
```

2.6 NetBSD

Use your preferred package management tool to ensure the correct packages are installed. For example, running pkgin as root:

```
pkgin install p5-gtk2 p5-SOAP-Lite p5-libwww rdesktop
```

Important: You will need to modify the very first line in the `remotebox` file so that it uses NetBSD's

implementation of Perl. Open the file in a text editor and replace the first line as follows:

```
#!/usr/bin/perl
```

replace with

```
#!/usr/pkg/bin/perl
```

2.7 FreeBSD

Use your preferred package management tool to ensure the correct packages are installed. For example with `pkg_add` as root:

```
pkg_add -r p5-Gtk2 p5-SOAP-Lite rdesktop
```

Alternatively, you can of course use the FreeBSD ports system.

2.8 Solaris / OpenSolaris / OpenIndiana

It is recommended that you use the OpenCSW (<http://www.opencsw.org>) repository with Solaris as it provides all the necessary dependencies for you. **You must** ensure that the standard Solaris package called 'SUNWmllib' is installed **before** installing any of the dependencies from OpenCSW.

Once OpenCSW is configured, please install the following packages as root using `pkgutil`, for example:

```
/opt/csw/bin/pkgutil -i pm_gtk2 pm_soaplite rdesktop
```

Important: You will need to modify the very first line in the `remotebox` file so that it uses OpenCSW's implementation of Perl. Open the file in a text editor and replace the first line as follows:

```
#!/usr/bin/perl
```

replace with

```
#!/opt/csw/bin/perl
```

3 RemoteBox Installation

Please ensure you have installed the dependencies mentioned in Chapter 2 and consulted the relevant section for your operating system. Assuming you have unpacked the tarball, simply change into the directory and run `remotebox` as follows:

```
./remotebox
```

Assuming all is well, you should be presented with the RemoteBox window. If not, please ensure you have the relevant dependencies installed. The RemoteBox directory can be placed anywhere you prefer or even renamed providing it retains it's layout. If you have not already configured the server, please do so now.

4 Configuring the Server

VirtualBox, including the Oracle Extension Pack should be installed on the system acting as the server. Instructions are available on the VirtualBox website if you are not sure how to do this. The following documentation assumes you have a working installation of VirtualBox complete with the Oracle Extension Pack, residing on the server. The extension pack provides features such as remote desktop display and PXE booting, which RemoteBox requires in order to be fully functional.

It is not necessary to have VirtualBox installed on the client machines, although it will not cause any problems or conflicts if you do. In addition, the client and server are not required to be running the same operating system. For example, RemoteBox could be running on a Linux client, connecting to VirtualBox on a Windows server.

Configuring the server primarily involves setting up the VirtualBox Web Service which provides a

mechanism for remote communication with VirtualBox. It's not a service that is intended to be accessed via a web browser, but a service for use by VirtualBox clients which in this case is RemoteBox. The underlying protocol is called SOAP, which in turn is built upon HTTP however you do not need to be familiar with these in order to setup and use the web service.

You need to decide which user the web service should run as and if necessary create a new user specifically for the purpose of running virtual machines. This is important because whichever user the web service runs as, decides whose virtual machines will be accessible through the web service. For example, if the user 'john' and the user 'mark' have virtual machines, then only john's virtual machines will be accessible if you run the web service as 'john', regardless of who you authenticate as.

For the purposes of this documentation, we will assume that you have created a user on your server called *virtual* and their primary group is *vboxusers*. If you do not know how to correctly create a new user for your operating system, consult its documentation. We will assume the name of the server is 'myserver.example.com' and it has an IP address of 192.168.1.10. If your server is running a firewall, then you will need to permit incoming connections to the default port of 18083.

4.1 Linux Server Configuration

4.1.1 The VirtualBox Web Service

If you have not done so already, ensure you have read the section 4. Configuring the Server, before continuing. Unless stated otherwise, these steps should be performed as the *root* user.

- Edit or create the following configuration file, using your preferred text editor

```
/etc/default/virtualbox
```

- Add the following contents to the text file, adjusting the parameters as appropriate for your server. You may also use the IP address instead of the hostname if so desired.

```
VBOXWEB_USER="virtual"
VBOXWEB_TIMEOUT=0
VBOXWEB_LOGFILE="/var/log/vboxweb.service.log"
VBOXWEB_HOST="myserver.example.com"
```

- Initialise and set the ownership of the log file. If the log file is missing or incorrectly owned then the web service will not start

```
touch /var/log/vboxweb.service.log
chown virtual:vboxusers /var/log/vboxweb.service.log
```

- Create the VirtualBox configuration directory in the user's homespace and set the ownership accordingly. Remember to use the homespace location appropriate to you.

```
mkdir /home/virtual/.VirtualBox
chown virtual:vboxusers /home/virtual/.VirtualBox
```

- Enable the service to automatically start on boot. This step varies between Linux distributions but for Fedora you would use:

```
chkconfig vboxweb-service on
```

- Either reboot your server or manually start the service by doing:

```
service vboxweb-service start
```

If the service fails to start, revisit the configuration steps to ensure nothing is missing or reboot the server to ensure all required services are started. Also checking the contents of `/var/log/vboxweb.service.log` may provide you with additional information. You should now be able to connect to the server using RemoteBox on the client.

4.1.2 SSL for the VirtualBox Web Service

If you have not done so already, ensure you have read the sections 4 Configuring the Server and 4.1.1 The VirtualBox Web Service before continuing. Configuring the server to accept SSL connections is an optional feature to improve security. The connection is encrypted so that passwords are not sent in the clear across the network. Using SSL however is **significantly slower** because of the encryption overhead and you will notice an increase in lag with RemoteBox.

The example which follows uses a self-signed certificate which should be sufficient for most people's needs.

- Make a directory where you wish the certificates and server keys to be stored. In these examples, as we're running the web service as the user *virtual*, we will create a directory in that user's homespace.

```
mkdir /home/virtual/vboxwebcerts
```

- Generate the server's RSA private key for use with the web service. You will be prompted for a password for the key. Our example will assume *mypassword* as the password.

```
cd /home/virtual/vboxwebcerts
```

```
openssl genrsa -des3 -out vboxweb.key 1024
```

- Generate the certificate signing request. You will be prompted for various X.509 attributes for the certificate. Most of them are purely informational, so fill them out as accurately as you see fit, however you should ensure that the '*Common Name*' attribute is set to either the fully-qualified hostname of your server, or its IP address. You can the '*Challenge Password*' empty unless you feel you need it.

```
cd /home/virtual/vboxwebcerts
```

```
openssl req -new -key vboxweb.key -out vboxweb.csr
```

- Generate the self-signed certificate. This example will generate a certificate which is valid for 365 days but you can set this value as you see fit. You will be prompted for the password you used to generate the key.

```
cd /home/virtual/vboxwebcerts
```

```
openssl x509 -req -days 365 -in vboxweb.csr -signkey vboxweb.key -out vboxweb.crt
```

- The VirtualBox web service expects both the private key and the certificate to be in the same file. So combine them as follows:

```
cd /home/virtual/vboxwebcerts
```

```
cat vboxweb.key vboxweb.crt > vboxweb-both.crt
```

- Create a text file using your preferred text editor and enter the password you chose and save the file at `/home/virtual/vboxweb.pwd`. This file should contain nothing but the password on the first line and will be use by the web service to unlock the private key.

- Fix up the permissions so that the files are more secure and less prone to prying eyes.

```
chown virtual:vboxusers /home/virtual/vboxwebcerts/*
chmod 0600 /home/virtual/vboxwebcerts/*
```

- Edit the web service configuration file located in `/etc/default/virtualbox` and add the following parameters:

```
VBOXWEB_SSL_PASSWORDFILE="/home/virtual/vboxwebcerts/vboxweb.pwd"
VBOXWEB_SSL_KEYFILE="/home/virtual/vboxwebcerts/vboxweb-both.crt"
```

- Finally, restart the web service. On most distributions, this is done as follows:

```
service vboxweb-service restart
```

When connecting to the server from RemoteBox, you should now prefix the URL with `https://`. Also note that non-SSL connections will be disabled.

4.2 Windows Server Configuration

4.2.1 The VirtualBox Web Service

If you have not done so already, ensure you have read the section 4. Configuring the Server, before continuing. Unfortunately the VirtualBox web service does not integrate with Windows as a standard system service, unlike the other supported operating systems. It must be manually started each time the server is booted, unless a custom solution is implemented. Assuming you are using a specific user called *'virtual'* then log into the server as *virtual* and perform the following commands from either the DOS Shell or the PowerShell.

Change to your VirtualBox box installation directory. The default location is assumed:

```
cd "C:\Program Files\Oracle\VirtualBox"
```

Then run the VirtualBox web service

```
vboxwebsrv -t0 -H myserver.example.com
```

Alternatively you can use the IP address if your server instead of its hostname. You should now be able to connect to the server using the RemoteBox client.

4.3 Solaris Server Configuration

4.3.1 The VirtualBox Web Service

If you have not done so already, ensure you have read the section 4. Configuring the Server, before continuing. Unless stated otherwise, these steps should be performed as the *root* user.

- Configure the web service to run as the user *virtual*.

```
svccfg -s svc:/application/virtualbox/web-service:default setprop config/user=virtual
```

- Add the timeout property to the web service.

```
svccfg -s svc:/application/virtualbox/web-service:default setprop config/timeout=integer: 0
```

- Add the log file property to the web service

```
svccfg -s webservice:default setprop config/logfile=asString: /var/log/vboxwebservice.log
```

- Set the hostname. Alternatively the IP address may be used.

```
svccfg -s svc:/application/virtualbox/webservice:default setprop config/host=myserver.example.com
```

- Tell SMF to commit the changes to the service

```
svcadm refresh svc:/application/virtualbox/webservice:default
```

- Initialise and set the ownership of the log file. If the log file is missing or incorrectly owned then the web service may not start

```
touch /var/log/vboxwebservice.log
```

```
chown virtual:vboxusers /var/log/vboxwebservice.log
```

- Create the VirtualBox configuration directory in the user's homespace and set the ownership accordingly. Remember to use the homespace location appropriate to you.

```
mkdir /export/home/virtual/.VirtualBox
```

```
chown virtual:vboxusers /export/home/virtual/.VirtualBox
```

- Start the web service and enable it on boot

```
svcadm enable svc:/application/virtualbox/webservice:default
```

If the service fails to start, revisit the configuration steps to ensure nothing is missing. Checking the contents of `/var/log/vboxwebservice.log` or the output of `svcs -x svc:/application/virtualbox/webservice:default` may provide you with additional information. You should now be able to connect to the server using RemoteBox on the client.

4.4 Mac OS X Server Configuration

4.4.1 The VirtualBox Web Service

If you have not done so already, ensure you have read the section 4. Configuring the Server, before continuing. A standard plist file is included with VirtualBox which is usually located in:

```
$HOME/Library/LaunchAgents/org.virtualbox.vboxwebsrv.plist
```

Edit the file with a text editor and change the `Disabled` key from `true` to `false`. The service can then be started by typing:

```
launchctl load ~/Library/LaunchAgents/org.virtualbox.vboxwebsrv.plist
```

4.5 Disabling Web Service Authentication

Disabling authentication to the web service is not recommended because it will effectively allow anybody to administer them, however it may be useful for debugging purposes particularly if you are experiencing trouble logging in. To disable authentication, execute the following command on the server as the user that the web service runs as:

```
vboxmanage setproperty websrvauthlibrary null
```

Then, when connecting with RemoteBox simply leave the username and password options blank.

5 Using RemoteBox

This section describes some basic principles of using RemoteBox, with particular emphasis on where RemoteBox differs significantly from VirtualBox. RemoteBox supports many of the features of the standard VirtualBox GUI as well as a few additional features. This section does not go into great depth because hopefully using RemoteBox should be reasonably familiar to anybody that has used VirtualBox's native graphical interface. RemoteBox makes heavy use of tool-tips to describe what the options are and do so you're encouraged to read them if you're unsure.

RemoteBox is essentially a web client application. In other words, almost everything you do with RemoteBox requires communicating over the network to the server, even simply clicking a button, so you should ensure your network is good and stable.

5.1 RemoteBox Preferences

Not to be confused with the VirtualBox preferences, this dialog configures preferences specifically for the RemoteBox client.

5.1.1 RDP Client

Tells RemoteBox which RDP client to call when a remote display connection is requested. The RDP client must be available otherwise a display connection will not open. The default value is:

```
rdesktop -T "%n - RemoteBox" %h:%p
```

Any RDP client which supports command line options can be used. Variable substitutions can and should be used where appropriate. Please refer to 5.4 Remote Display for a complete list.

5.1.2 Auto Open Guest's Display on Guest Start

If enabled, then RemoteBox will try to automatically open the remote display for the guest when you power on or resume a guest. If disabled then you will manually need to open the remote display by selecting the "Remote Display" button.

5.1.3 Enable Heartbeat

If enabled then RemoteBox will send a heartbeat to the VirtualBox web service every 60 seconds. This serves two purposes. Firstly to monitor the connection status and secondly to keep the connection alive. You should not disable the heartbeat without being fully aware of the consequences as there is very little reason to do so. In any case, the VirtualBox web service should not be configured with a time-out lower than 60 seconds.

5.1.4 Default Stop Action

This defines what action RemoteBox takes when the "Stop" button is pressed. Please note that whatever option you choose, all actions are still available in the sub-menu next to the "Stop" button. The options are described as follows:

Instant Power Off: Equivalent to removing the power from virtual machine. Use with care.

ACPI Shutdown: An ACPI request is sent to the guest to power it off cleanly. The operating system must support ACPI and be able to respond to shutdown requests otherwise nothing will happen.

Save Guest State: Saves the state of the guest for resuming later. This is approximately equivalent to "Hibernating" and does not require operating system support.

5.2 Connecting to Server

In order to administer the virtual machines and guests, you should connect to the server running the VirtualBox web service. If you experience problems logging on, consider disabling authentication to the web server for testing purposes. Details on how to do this are described elsewhere in this document. Pressing the *Connect* button will open a dialog window, where the following information should be supplied:

5.2.1 URL

The URL of the server to connect to. This is generally of the form `http://<server>:<port>`. If the port number is omitted it will assume the default of 18083. For example:

`http://myserver.home.lan:18083`

or

`http://192.168.1.5:18083`

5.2.2 Username

The username that the VirtualBox web service is running as. If you have authentication disabled, then you can leave it empty.

5.2.3 Password

The password of the user that the VirtualBox web service is running as. If you have authentication disabled you can leave it empty.

5.3 The Main Window

The main window should be familiar to users of VirtualBox. It's worth mentioning however that the status of the guests are not updated in real-time, although this may change in the future. To explicitly see changes which have occurred outside of RemoteBox (e.g. another process powered on a guest) you can use the *Refresh* button.

5.4 Remote Display

RemoteBox makes use of the RDP feature of VirtualBox in order to show the guest's display. To use this option, each guest should be configured with the RDP server enabled. If you intend to run multiple guests simultaneously, then each guest's RDP server should be configured to run on a separate port number. For guests created directly with RemoteBox, the RDP server is automatically enabled and a random port assigned. See section 5.6 Creating New Guests for further information.

By default, RemoteBox uses an RDP client called `rdesktop`. However, you can also use alternative clients such as `freerdp` (ie `xfreerdp`) or you can configure RemoteBox to use your preferred client, providing it accepts command line parameters. In the preferences window of RemoteBox you should enter the path to your RDP client and include any desired options. RemoteBox uses special values which are substituted when the RDP client is launched and these should be used where your RDP client expects to see things such as the host-name. For example, the default is:

```
rdesktop -T "%n - RemoteBox" %h:%p
```

Alternatively, if you wanted to use `xfreerdp` (which is actually better than `rdesktop`) you could use:

```
xfreerdp -g 1024x768 %h:%p
```

The supported special values are:

%h	The hostname of the server running VirtualBox, that RemoteBox is connected to.
%n	The name of the guest. Useful for setting the RDP window title
%o	The operating system of the guest
%p	The port number to use when connecting with RDP
%P	The password used to connect to VirtualBox
%U	The username used to connect to VirtualBox

5.5 Remote Display with Sound

It is possible to hear the sound output from the guests' in much the same way you can see their display, providing your RDP client supports sound. Rdesktop for example can use sound if it's compiled to do so. It's advised that you configure the guest to use the dummy audio driver otherwise it will try to use the server's sound output, which may or may not be available. To enable sound with rdesktop simply add the following parameter to the RDP client preferences in RemoteBox.

```
-r sound:local
```

5.6 Creating New Guests

Creating guests is similar to VirtualBox except that RemoteBox will automatically enable the RDP server of the guest and pick a random port between 50000 and 65000 for it to run on. The reason being that each guest should ideally use a different RDP port, particularly if you plan on running more than one simultaneously. This also allows the 'Remote Display' option to work in RemoteBox. If you're unhappy with the chosen port or with the RDP server being enabled, these can be changed in the guest's settings.

5.7 Virtual Media Manager

All media is from the reference point of the server and not the RemoteBox client, so when adding additional media such as CD/DVD images, expect to see the file system layout of the server and not your client machine.

5.8 Installing Guest Additions

If you have not done so already, you should add `VBoxGuestAdditions.iso` to the Virtual Media Manager (VMM). Choose 'Add DVD/CD', just as you would with any other CD-ROM or DVD image. The ISO is installed by default with your installation of VirtualBox on the server. Once it's available in the VMM, you can attach it to the CD/DVD drive of the guest machine and install the Guest Additions. The default location of the ISO, depends upon your servers operating system. See the table below.

Linux	/usr/share/virtualbox/VBoxGuestAdditions.iso
Windows	C:\Program Files\Oracle\VirtualBox\VBoxGuestAdditions.iso
Mac OS X	/Applications/VirtualBox.app/Contents/MacOS/VBoxGuestAdditions.iso
Solaris	/opt/VirtualBox/additions/VBoxGuestAdditions.iso

5.9 Hot Plugging and Unplugging vCPUs

RemoteBox has the ability to hot plug and hot unplug vCPUs from a guest, even while it is running. This should be considered an experimental feature for the moment. There are a number of pre-requisites which must be met in order for this to work correctly. They are listed as follows:

- The guest must be using hardware virtualisation, this is usually the case anyway.
Edit Settings->System->Acceleration->Enable VT-x/AMD-V
- The guest must have CPU hot plugging enabled.
Edit Settings->System->Processor->Allow CPU Hot Plugging
- Most operating systems will require I/O APIC to be enabled. Due to limitations of the Windows operating system, this option should not be changed for a guest running Windows. Windows requires this option to be set, **before** installation. Other operating systems are not affected.
Edit Settings->System->Motherboard->Enable IO APIC
- Lastly, the guest operating system itself must support CPU hot plugging and/or hot unplugging.

The exact process for hot plugging and hot unplugging a CPU is operating system dependant. Many versions of UNIX, including Linux support hot plugging and hot removing CPUs. Windows has very little support for CPU hot plugging and no version of Windows supports CPU hot unplugging. You should consult the documentation for the guest operating system to find the exact procedure and its support status. A general set of guidelines follows.

The general process for hot plugging a vCPU is:

- Enable the vCPU in RemoteBox
- At this point, some operating systems may automatically detect it and bring it online, others will require you to bring the CPU online manually.

The generally process for hot unplugging a vCPU is:

- Disable or offline the vCPU in the guest **first**.
- Disable the vCPU in RemoteBox

6 FAQ & Troubleshooting

If you experience problems when using RemoteBox, viewing the web service logs or the guest logs on the server may provide an additional source of information. Sometimes, restarting the web service may help.

6.1.1 Does RemoteBox need to be running on the same operating system as VirtualBox?

No, the RemoteBox client and VirtualBox installation can reside on different operating systems. For example, one can install RemoteBox on Linux but administer a Windows installation of VirtualBox.

6.1.2 Can I use RemoteBox to administer VirtualBox on the same machine?

Yes. Just ensure the VirtualBox web service is running on the same machine and by default connect to <http://localhost:18083> with RemoteBox

6.1.3 Does RemoteBox run on Windows?

At the moment no perl distribution for Windows, that I'm aware of, supports the perl modules required by RemoteBox. If you get RemoteBox to run on Windows, please let me know.

6.1.4 Does RemoteBox run on my favourite flavour of 'UNIX'?

Probably, however many flavours of UNIX (particularly commercial flavours) do not come with the appropriate dependencies as standard, nor have a repository for the easy installation of them. This means in all likelihood, you'll have to 'roll your own'.

6.1.5 How can I force set the remote display size for the guest?

Use the "Set Video Hint" option in the machine menu and choose a pre-defined resolution or choose your own. Providing the guest has the guest additions installed and enough Video RAM configured to support the resolution it should switch resolution. This may also depend somewhat on how compliant your RDP client is but it works fine with rdesktop

6.1.6 Can I convert a hard disk image to another format?

Yes. Open the VMM and ensure the "Hard Disk" tab is select. Choose the hard disk to want to copy and convert. Select the "Copy & Convert" option and select the format you require. You will be prompted where you would like to save the new image. This operation will not alter the existing image.

6.1.7 Why is RemoteBox restricted to certain versions of VirtualBox?

VirtualBox versions are generally of the form Major.Minor.Micro (e.g. 3.2.2). VirtualBox only guarantees API compatibility between versions if it is the Micro suffix which has changed. For example 3.1.6 is compatible with 3.1.8, but 3.1.8 is not entirely compatible with 3.2.0. In order to reduce code complexity RemoteBox only targets the latest version of the API at the time of release. It will warn you, if you use an incompatible version but you may experience problems if you choose to continue.

6.1.8 Why are the mouse pointers are out of sync when using the Remote Display?

To enable mouse synchronisation, guest additions should be installed and running within the guest. If you cannot enable guest additions because you're installing an operating system or there are no guest additions for your operating system then providing your guest has USB enabled and it supports USB then change the mouse type to "USB Tablet".

6.1.9 When I try to open the manual in RemoteBox, nothing is displayed...

RemoteBox requires the `xdg-open` command which is part of the `xdg-utils` package. This package is usually installed by default on most distributions, but if not, please install it along with an appropriate PDF viewer.

6.1.10 I run VirtualBox 4.1.X, what version of RemoteBox is required?

The last version of RemoteBox to support VirtualBox 4.1.X was version 1.3. Please note that old versions of RemoteBox are not supported or updated.

6.1.11 I run VirtualBox 4.0.X, what version of RemoteBox is required?

The last version of RemoteBox to support VirtualBox 4.0.X was version 0.9. Please note that old versions of RemoteBox are not supported or updated.

6.1.12 I run VirtualBox 3.2.X, what version of RemoteBox is required?

The last version of RemoteBox to support VirtualBox 3.2.X was version 0.5. Versions of VirtualBox earlier than 3.2.0 are not supported by any version of RemoteBox. Please note that old versions of RemoteBox are not supported or updated.

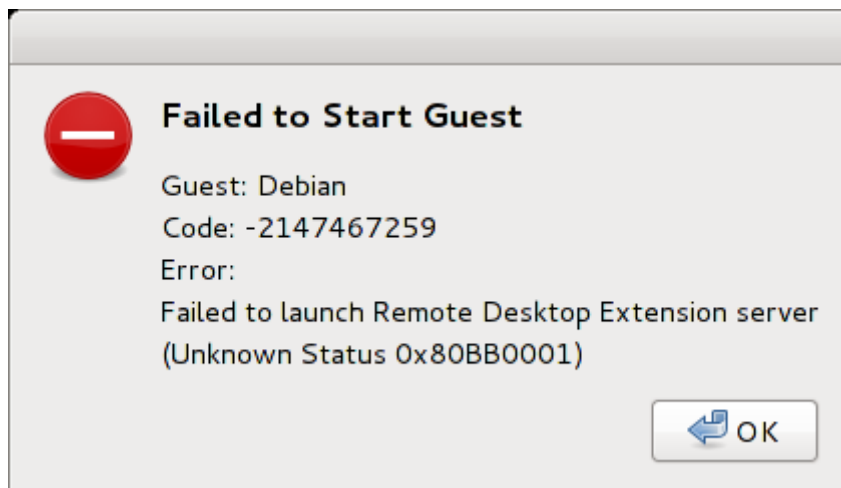
6.1.13 I run VirtualBox 3.1.X or earlier, what version of RemoteBox is required?

Versions of VirtualBox earlier than 3.2.0 are not supported by any version of RemoteBox.

6.1.14 I have a version of GTK older than 2.22. Can I still use RemoteBox?

Yes, RemoteBox v1.1 and earlier require a minimum of GTK v2.16. Please note that old versions of RemoteBox are not supported or updated.

6.1.15 I get an error message similar to the following:



You do not have the Oracle Extension Pack installed or you have an old version of the pack installed. Please download the appropriate Oracle Extension Pack for your version of VirtualBox.

6.1.16 I get an error message on the command line similar to the following "Incorrect parameter at <path>/SOAP/Lite.pm" line xxxx". What can I do?

This seems to be a bug in your particular perl-Gtk2 implementation. If possible upgrade your version of perl-Gtk2. You can also work around this by editing the SOAP/Lite.pm file and changing the line from:

```
die "Incorrect parameter" unless $itself =~/^\d$/;
to
die "Incorrect parameter" unless $itself =~/^\d*$/;
```

(Note the addition of the asterisk *)

6.1.17 I repeatedly get disconnected from the server, what's wrong?

Unless you have a particularly bad network, you probably have either a low timeout configured on the web service, or you have disabled the heartbeat in RemoteBox. Please ensure the heartbeat is enabled in RemoteBox (*File->Preferences->Heartbeat*). Also ensure that the web service either has timeouts disabled or is not configured lower than 60 seconds.

6.1.18 What is the default port that the VirtualBox web service runs on?

By default, the VirtualBox web service runs on port 18083.

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9 Contact

If you have any queries or bug reports regarding RemoteBox, please send an email to:

packages [AT] amiga-hardware DOT com