Parallels POCbox

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Introduction

Parallels® Remote Application Server (RAS) is an application delivery and virtual desktop solution. It extends Microsoft Windows® Remote Desktop Services by providing centralized management, universal printing, and remote access to Windows Terminal Services-based applications from virtually any device. The solution also includes a built-in, hypervisor agnostic Virtual Desktop Infrastructure (VDI) solution. Traditional application delivery and VDI solutions can be challenging to set up and manage. Design and implementation can take weeks or even months. In contrast, Parallels Remote Application Server can be installed in days or even hours, providing a quicker return on your investment and an easier path to realizing the benefits of remote desktop computing. This document describes the best practice guidelines for deploying and configuring Parallels Remote Application Server v15.5.

POCbox Requirements and Architecture

Windows Server Requirements

- The POCbox contains a single virtual machine with the following roles:
- Firewall separating the POCbox and the rest of the network
- Domain Controller, DNS, and DHCP Services
- 2 RAS Publishing Agents (Consoles in Active-Active mode)
- 1 Gateway Server
- 1 Terminal Server (RDS) with preconfigured credentials

Installation Requirements

The VMs were exported using OVA format and they can be imported to VMware ESXi™, VMware® Workstation, or VirtualBox. The tutorial will show you how to use VirtualBox.

Virtualization Solution

Server:
- VMware ESX®
- Microsoft Hyper-V®

Laptop/PC:
- VirtualBox
- Parallels Desktop® for Mac Pro Edition/Business Edition
- VMware Workstation

Hardware Requirements

- Available Disk space: 30 GB
- Memory: 4 GB Free.
- Virtual Processors: 4
Importing VM for Parallels Desktop Pro Edition/Business Edition

Download Links
1. Download VM Download Link.

Importing the VMs to Parallels Desktop Pro Edition/Business Edition

- Decompress the VM files using 7z.
- Register the VMs by dragging the VMs to the Parallels Desktop Control Center.
- Configure VM networks and Port Forwarding.

Making Sure All VMs Are Registered

Once the VMs are imported and configured, the following VMs should be in Parallels Desktop Control Center.

Configuring VM Network

The VM should be configured to use Shared Mode.

Configuring VM Network

Host Network
Go to Parallels > Preferences and create a new Host-Only Network. Make sure “Enable IPv4 DHCP” is turned OFF.
Host Network

Go to Parallels > Preferences and create a new Port Forwarding rule as follows:

From your local browser and VMs, up connect to https://localhost/RASHTML5Gateway.

If the page is not open, check routing rules in Parallels Desktop and/or pfense. Another test option is to open the Terminal and run a telnet to localhost on port 443. The result should be:
Importing the VMs into VirtualBox

Download Links
1. Download VM Download Link.

Importing the VMs to VirtualBox

Go to File > Import Appliance

Select one appliance at a time:

Use default settings and click Import:
Once the VMs are imported, you should have the following VMs in the VirtualBox Console:

![VirtualBox Console](image)

### Configuring VM Network

<table>
<thead>
<tr>
<th>VM Name</th>
<th>Adapter #1</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL-IN-ONE</td>
<td>Bridged Network</td>
</tr>
</tbody>
</table>

### ESXi Deployment

**Prepare VLAN to Isolate VM Traffic**

**Configuring VM Network**

<table>
<thead>
<tr>
<th>VM Name</th>
<th>VLAN (w/ network access)</th>
<th>DMZ VLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL-IN-ONE</td>
<td>Bridged Network</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Preparing to Import the VM

Once the export is complete, you can try to deploy the OVA to ESXi, but you will receive the following error: The OVF package requires unsupported hardware. Details: Line 25: Unsupported hardware family 'virtualbox-2.2'.

![Error Message](image)

To fix this error, you will need to edit the OVF xml file in the OVA package. The OVA package wraps an OVF file, an mf checksum file, and the actual vmdk or virtual machine disk. To extract the contents of this file, use 7Zip (right click > 7Zip > Open Archive) to extract the OVA contents. When you open the archive, you may receive a TAR error. You can just click OK to ignore it.
Make a backup copy of the OVF file, and then open the OVF file with a text editor such as Notepad++. Change the following line:

```xml
<vssd:VirtualSystemType>virtualbox-2.2</vssd:VirtualSystemType>
```

to

```xml
<vssd:VirtualSystemType>vmx-07</vssd:VirtualSystemType>
```

After you have made this change, the checksum in the mf file will no longer match. To fix this error, you can just remove the line that references the OVF file. For reference, my file looked like this:

SHA1 (MyVM.ovf)= 15d2f22b24990179e414df556fe4a2e4697caee7

Import the VM

At this point, you can try to attach the VM to your VMware box. Open the VMware vSphere® client and connect to your host machine. Now choose file „Deploy OVF Template“. Select the OVF file you just edited and click Next. Make sure to select the OVF file, not the original OVA file.

At this point, you may receive the following hardware error: „The OVF package requires unsupported hardware. Details: Line 74: OVF hardware element ‘ResourceType’ with instance ID ,6’. No support for the virtual hardware device type ,35'.“
To fix this error, open the OVF file and remove the `<item>` element at the line number in question. In this case, it was the sound card:

```xml
<item>
    <rasd:AutomaticAllocation>false</rasd:AutomaticAllocation>
    <rasd:Caption>sound</rasd:Caption>
    <rasd:Description>Sound Card</rasd:Description>
    <rasd:ElementName>sound</rasd:ElementName>
    <rasd:InstanceID>6</rasd:InstanceID>
    <rasd:ResourceSubType>ensoniq1371</rasd:ResourceSubType>
    <rasd:ResourceType>35</rasd:ResourceType>
</item>
```

After you have made these adjustments to the OVF, try to load the file again. If you happened to leave the Select OVF window open, you may not be able to select the OVF file from the browser or the drop-down list selector. Just cancel and try again.

At this point, you should get something like the following when you click Next after selecting the modified OVF:

Now follow the prompts to finish importing your machine:

- Click Next and enter (or verify) the name.
- Click Next and adjust disk formatting if you wish.
- Click Next and verify the network.
- Click Next and click Finish.

At this point, you will need to wait a few minutes for the VM to deploy. Once the machine has deployed, open the machine settings and make any adjustments you wish, such as memory or network adapter settings.
To complete your machine import, power on the machine, remove VirtualBox Guest Additions, and install the VMware Guest Tools. Note: After the machine boots up and you log in, Windows will try to add hardware. Click Cancel until you are installing the VMware Guest Tools.

First, remove VirtualBox Guest Additions and restart. After the machine restarts, install the VMware Guest Tools. After the final restart, you should have your VirtualBox machine running on VMware.

Repeat this step for all VMs.

**Starting up the VM**

All-in-one > Auto-logon to Console > Test your access in Client and/or HTML5

From your local browser and VMs, up connect to [https://Bridged_network_IP_pfsense/RASHTML5Gateway](https://Bridged_network_IP_pfsense/RASHTML5Gateway). If the page is not open, check the routing rules in VirtualBox and/or pfsense. Another test option is to open the Terminal and run a telnet to localhost on port 443. The result should be:
Credentials

<table>
<thead>
<tr>
<th>User Name</th>
<th>Password</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab\Administrator</td>
<td>Ras12345!</td>
<td>Domain Administrator</td>
</tr>
<tr>
<td>Lab\Demo</td>
<td>Ras12345!</td>
<td>End user</td>
</tr>
</tbody>
</table>

Where to Start the Demo or Watch Tutorials

The demo should start either from the mobile client or from the Parallels Remote Application Server Console. The demo can be watched on this [YouTube channel](https://www.youtube.com).

Licenses

Remote Application Server

The appliance license has expired and a new license needs to be activated using Parallels My Account. To replace the existing license, go to Parallels Remote Application Server Console > License, and click on the Manage License button to reactivate the license with your license key.

Windows Licenses and RDS Cal

Parallels does not resell Microsoft licenses, and the Windows license and RDS licenses are running in trial mode. It is highly recommended to replace these licenses as soon as possible.