

DJIGZO EMAIL ENCRYPTION GATEWAY

Djigzo Virtual Appliance Guide

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1 Introduction

The Djigzo Virtual Appliance is a VMware virtual machine with a full installation of the Djigzo Email Encryption Gateway. This guide explains how to install and setup the Djigzo Virtual Appliance.

2 Requirements

VMware Infrastructure

- ESX Server 3.0, 3.5 and 4.0
- ESXi 3.5 and 4.0 Embedded
- VMware vCenter Server 2.0, 2.5 and 4.0

Other VMware¹

- VMware Workstation 5.0, 6.0, 6.5
- VMware Player 1.0, 2.0, 2.5
- VMware Fusion 1.0, 2.0
- VMware ACE 2.0, 2.5
- VMware Server 1.0, 2.0

3 Installation

The required Virtual Appliance distribution and installation procedure differs between VMware infrastructure (ESXi etc.) and other VMware virtual machines (VMware workstation etc.).

3.1 VMware infrastructure

This section will explain how to install the Virtual Appliance on the VMware Infrastructure (ESX server etc.).

3.1.1 download the Virtual Appliance

The Virtual Appliance can be downloaded from <http://www.djigzo.com/downloads.html>. The ESX version of the Virtual Appliance should be downloaded and unzipped.

3.1.2 Import Virtual Appliance

The Virtual Appliance must be imported into VMware with the *VMware Infrastructure Client* or with the *VMware vCenter Converter*.

VMware Infrastructure Client The Virtual Appliance can be directly imported as a Virtual Appliance with the *VMware Infrastructure Client* (see Figure 1). Open the directory where the zip file has been unzipped and select the .ovf file.

¹The VMware .vmdk file can also be used with VirtualBox. See Appendix A.

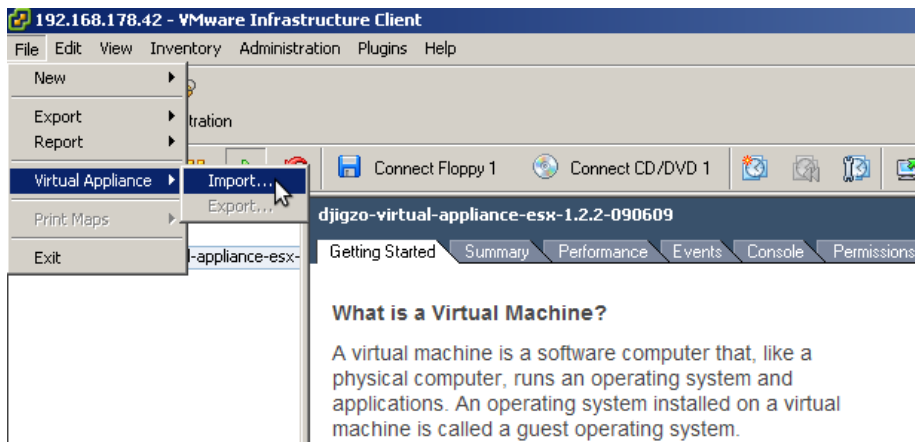


Figure 1: VMware Infrastructure Client

Sometimes however, importing a Virtual Appliance with the *VMware Infrastructure Client* fails because the VMware client is not directly compatible with the Virtual Appliance. When the import fails the Virtual Appliance should be imported with the *VMware vCenter Converter*².

VMware vCenter Converter The *VMware vCenter Converter* can be used to convert and import Virtual Machines.

- 1) Start the *VMware vCenter Converter* and select *Convert Machine*. This opens the Conversion wizard (see Figure 2).
- 2) Click *Browse to virtual appliance file* and select the Virtual Appliance .ovf file from the directory where the zip file has been unzipped.
- 3) Click *Next*, *Next* and accept the EULA.
- 4) Now select the *VMware Infrastructure virtual machine* destination type and specify the destination of the VMware server (see Figure 3).
- 5) Click *Next* and specify the name for the new virtual machine and select the Datastore (see Figure 4).
- 6) Click *Next*. On the *View/Edit options* change virtual machine options like memory, number of virtual processors etc. if required or leave the defaults.
- 7) Click *Next* until the *Ready to complete page* is reached.
- 6) Now click *Finish* to start the import of the Virtual Appliance (see Figure 5). The import task can take a few minutes.

²The *VMware vCenter Converter* can be freely downloaded from <http://www.vmware.com/products/converter/>

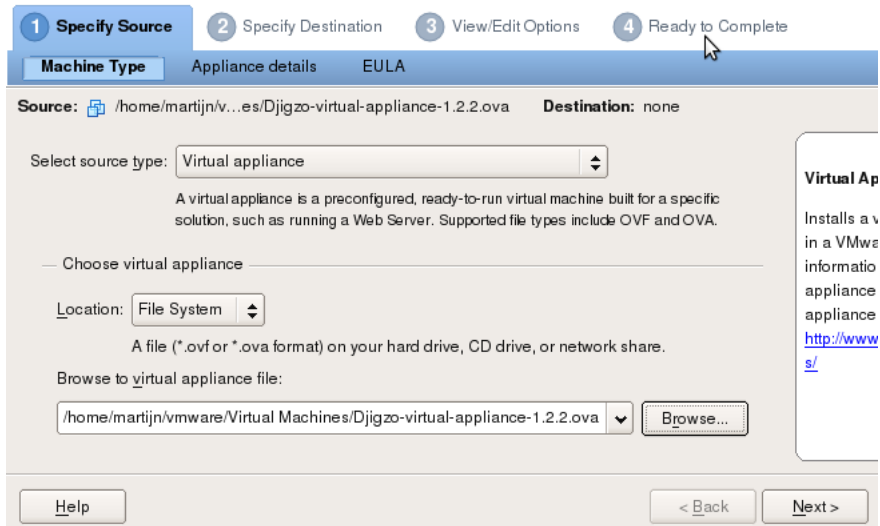


Figure 2: VMware vCenter Converter

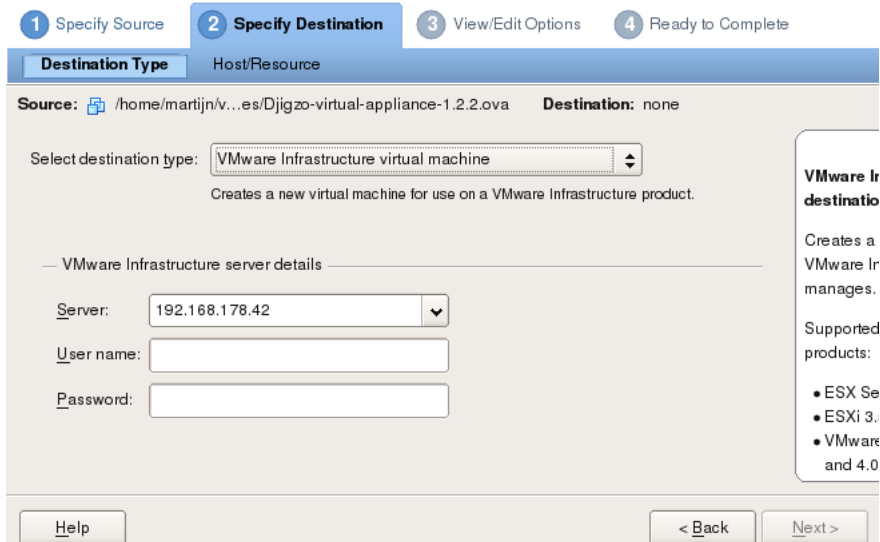


Figure 3: VMware vCenter Converter destination

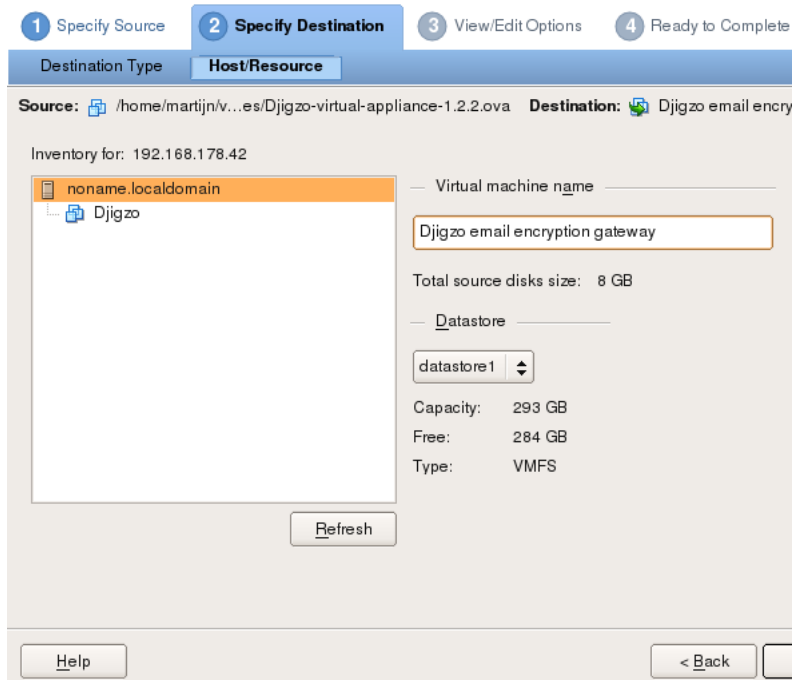


Figure 4: VMware vCenter Converter datastore

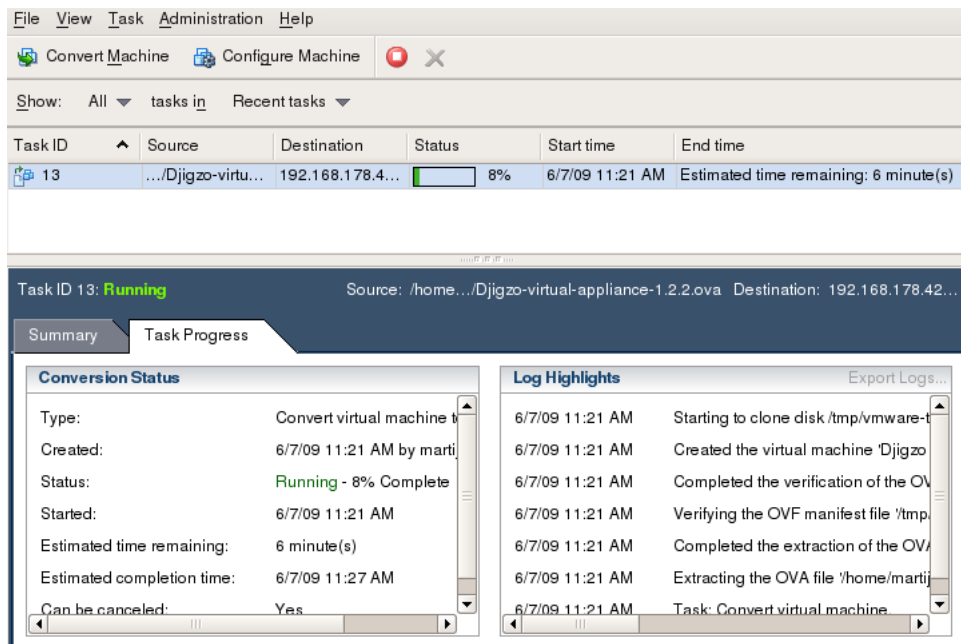


Figure 5: VMware vCenter Converter converting

3.2 VMware stand alone

This section will explain how to install the Virtual Appliance on VMware Workstation or any other stand alone VMware virtual machine.

3.2.1 download the Virtual Appliance

The Virtual Appliance can be downloaded from <http://www.djigzo.com/downloads.html>. The non-ESX version of the Virtual Appliance should be downloaded.

3.2.2 Importing Virtual Appliance

- 1) Unzip the Virtual Appliance to the folder with the Virtual Machines.
- 2) Open the .vmx file with VMware.
- 3) Optionally, change Virtual Machine settings (like memory usage, etc.).

The Virtual Appliance has been build for VMware Player 1.0 and should be compatible with VMware workstation and VMware server. If the Virtual Appliance cannot be used directly, use VMware Converter to convert the virtual machine to another VMware version.

3.3 Starting the Virtual Appliance

After the Virtual Appliance has been imported, the virtual machine can be “Powered on”. The first time the Virtual Appliance starts, a disk check is forced to make sure the disk was not corrupted by the import.

4 Virtual Appliance configuration

The Djigzo Virtual Appliance is a full installation of the Djigzo Email Encryption Gateway. The Virtual Appliance therefore requires network access, DNS setup etc. By default the network connection of the Virtual Appliance is set to Bridged mode³. By default the Virtual Appliance is configured to get it’s network IP address from any available *DHCP* server. Because the IP address is not yet known the administrator should use the console to login.

Login credentials: Use the following default credentials:

```
username: djigzo-admin
password: djigzo
```

After logging into the Virtual Appliance a system configuration tool will be started which can be used to configure the system (see Figure 6). SSH login will be available after the network has been setup. The system configuration tool contains four main menu items: *File*, *Config*, *Info* and *Other*.

³If bridge mode does not work, try to use NAT.

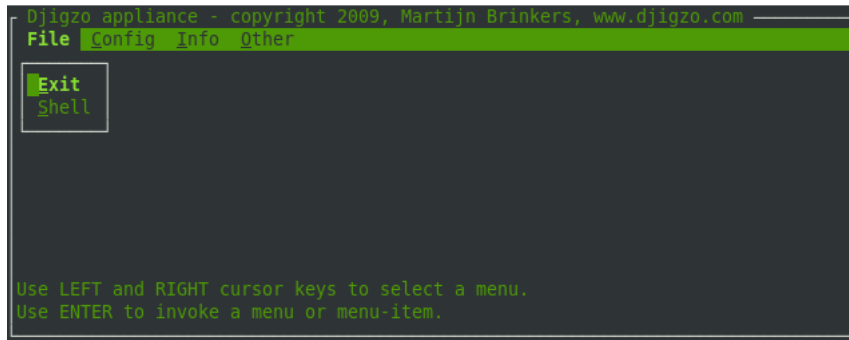


Figure 6: Virtual Appliance console

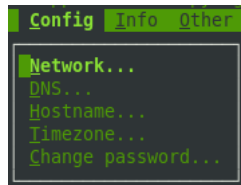


Figure 7: Virtual Appliance config

4.1 File

The File menu contains two sub-items: *Exit* and *Shell*. *Exit* logs the administrator off. *Shell* opens a Bash shell from which lower level system administration can be done⁴.

4.2 Config

The config menu contains five sub-items: *Network*, *DNS*, *Hostname*, *Timezone* and *Change password* (see Figure 7).

4.2.1 Network

The network configuration is used for configuring a DHCP or static IP address (see Figure 8). The fields *address*, *gateway* and *netmask* are required when

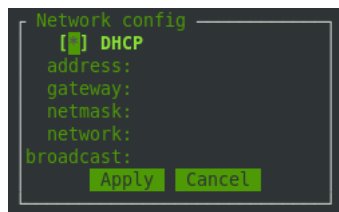


Figure 8: Virtual Appliance network

a static IP is used. All settings must be valid IPv4 addresses. If *broadcast*

⁴Djigzo Virtual Appliance is based on Ubuntu 8.04.

is specified, *network* has to be specified as well. Applying the settings will reconfigure the network (this can take a few seconds). If the network settings of the Virtual Machine Settings are incorrect reconfiguring the network will fail.

4.2.2 DNS

The Virtual Appliance requires at least one DNS setting (see Figure 9). When

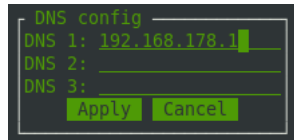


Figure 9: Virtual Appliance DNS

DHCP is used, the DNS settings are retrieved from the DHCP server and manual changes to the DNS settings are overwritten with the settings from the DHCP server. Setting the DNS is therefore not required when DHCP is used.

4.2.3 Hostname

The *Hostname* should be the fully qualified name of the server.

4.2.4 Timezone

Timezone starts a system tool which can be used to setup the correct timezone for the server.

4.2.5 Change password

Change password starts a system tool which can be used to change the password for the “djigzo-admin” account.

4.3 Info

The *Info* menu contains two sub-items: *Network* and *DNS*. *Network* can be used to view the current network settings and *DNS* can be used to view the current DNS settings.

4.4 Other

The *Other* menu contains four sub-items: *Reboot*, *Halt*, *Restart services* and *Update* (see Figure 10).

4.4.1 Reboot

Reboot will reboot the system.

4.4.2 Halt

Halt will shutdown and poweroff the system.

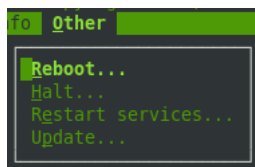


Figure 10: Virtual Appliance other

4.4.3 Restart services

This will restart the Djigzo services (the Mail Processing Agent, Postfix and the Web Application).

4.4.4 Update

Update will check for system updates (security updates and other updates)⁵. *Update* will only update existing packages and *Upgrade* will also install new packages if required. If the Linux Kernel is upgraded the system should be rebooted.

5 Finish

After the Virtual Appliance has been successfully setup continue setting up the gateway by consulting the *Djigzo Administration Guide*.

A VirtualBox

The VMWare Virtual Appliance can also be used with VirtualBox with the following procedure:

- 1) Open the Virtual Media Manager (File → Virtual Media Manager) and press *Add* to add an existing medium.
- 2) *Select a hard disk image file*. Select the Virtual Appliance .vmdk file and close the dialog.
- 3) Create a new Virtual Machine. Use Operating system Linux and version Ubuntu.
- 4) Set base memory \geq 640 MB.
- 5) Select the .vmdk hard disk created in step 2.
- 6) Make sure the network is set to: *Attached to: Host Interface*.
- 7) Finish.

You can now startup the Virtual Appliance.

⁵Only Ubuntu is updated. Djizgo is not automatically updated.

B Troubleshooting

B.1 Incorrect keyboard mapping on a Linux Host

VMware Server 1 or 2 on a Linux host sometimes uses in incorrect keyboard mapping. Many function keys like CTRL, SHIFT, arrows keys etc. do nothing or map to the wrong key. This can be solved by adding the following line to the file `/etc/vmware/config`:

```
xkeymap.nokeycodeMap = true
```

For more information see http://www.vmware.com/support/ws55/doc/ws_devices_keymap_linux.html.

B.2 Network failure

By default the Djigzo Virtual Appliance is setup for Bridged mode. If Bridged mode fails you should try NAT.

C Port usage

Djigzo uses the following ports for external → internal (listening ports)

Port	Service	Description
22	SSH	Console access
25	SMTP	Send/Receive email
80	HTTP	Web manager
443	HTTPS	Web manager

and for internal → external

Port	Service	Description
25	SMTP	Send/Receive email
80	HTTP	CRL download
139	SMB/CIFS	remote backup and restore
398	LDAP	CRL download
443	HTTPS	CRL download
445	SMB/CIFS	remote backup and restore