



## Installation Guide:

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# ALB-VA

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## jetNEXUS Introduction

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## Scope

The aim of the document is to provide assistance with the implementation of the Accelerating Load Balancer Virtual Appliance (here in referred to as the ALBX-VA) into a virtual network environment. It aims to give an overview of setting up the basic service but is not intended as a full user manual.

## Recommended VMware configuration for ALB-VA

The ALB-X VA is suitable for VMware ESX Server, VMware Workstation & VMware Player.

For the ALB-X VA, we would recommend a minimum of 512MB up to 4GB of allocated memory and 4GB of disk space. When caching is required, 1GB to 2GB memory is ideal.

## Installing jetNEXUS ALB-VA with ESX/ESXi Server

The jetNEXUS Virtual appliance can be easily installed onto an ESX or ESXi server. Extract the ALB-VA file to your local machine or server. Open VMware Virtual Infrastructure Client or VSphere Client depending on what version of ESX you are using.

In your VSphere client select File: Deploy OVF Template.

- Browse and select the location where you have saved your files, Select the .OVF file and [Click →NEXT](#)
- You will be asked to name the appliance, Type and name and [Click →NEXT](#)
- You will be asked to select a datastore your Virtual Machine will run from. Select a datastore with enough space and [Click →NEXT](#)
- You will be told information about the product, Size, VM size [Click →NEXT](#)
- [Click →NEXT](#)) your VM is then Ready to be installed, once the files have been copied to the Datastore.

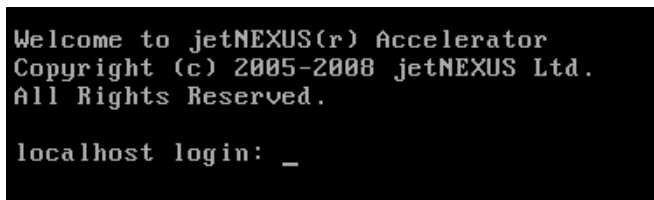
Within your VSphere client, you will now be able to see the new virtual machine.

Right click on the VM and go to Power then Power-On

Your VM will then boot, a jetNEXUS boot screen will show on the console.



You will then be presented with a login to the VM.



Please refer to the [Basic Configuration](#) section below for further instructions:

## Installing jetNEXUS ALB-VA with VMware Workstation

The jetNEXUS Virtual appliance can be easily installed with VMware Workstation. Extract the zipped ALB-VA files to your local machine or server. You will be presented with several VM files documentation and the jetNEXUS discovery application.

Open VMware workstation application; go to File Open. You will need to browse to the location where you have saved your jetNEXUS VM files, and click on the .VMX file and then click on open.

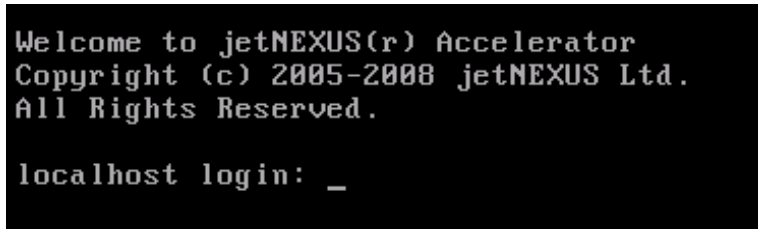
Your VM will then be shown in the workstation screen; you will now need to power this machine on.

You will then need to power on the virtual machine. Right click the VM and click on Power On.

Your VM will then boot, a jetNEXUS boot screen will show on the console.



You will then be presented with a login to the jetNEXUS-VA.



Please refer to the [Basic Configuration](#) section for further instructions:

## Installing jetNEXUS ALB-VA with VMware Player

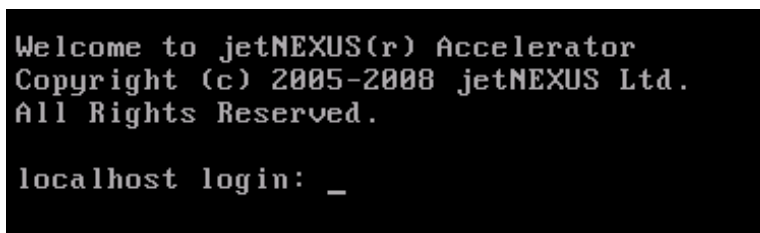
The jetNEXUS Virtual appliance can be easily installed with VMware Player. Extract the zipped ALB-VA files to your local machine or server. You will be presented with several VM files, documentation and the jetNEXUS discovery application.

- Open VMware Player application; Click on [Open a Virtual Machine](#).
- You will need to browse to the location where you have saved your jetNEXUS VM files, and click on the .VMX file and then [Click Open](#).
- Your VM will then be shown in the VMware Player screen; you will now need to power this machine on.
- Right click the VM and click on [Play Virtual Machine](#).
- Click “[I copied it](#)” when prompted. (This will only happen the first time the VA is booted).

Your VM will then boot, a jetNEXUS boot screen will show on the console.



You will then be presented with a login to the jetNEXUS-VA.



Please refer to the [Basic Configuration](#) section for further instructions

## Installing jetNEXUS ALB-VA with Citrix XenServer

The jetNEXUS Virtual appliance can be easily installed onto a Citrix XenServer. Extract the ALB-VA file to your local machine or server. Open Citrix XenCenter Client.

- In your XenCenter client select **File: Import**
- Browse and select the location where you have saved your files, Select the **.OVF** file and **Click →Open→Next**
- You will be asked to select the location where the VM will be placed. Choose on which XenServer you wish to install and **Click →NEXT**
- You will be asked to select a storage repository (SR) to place your virtual disks. Select an SR with enough space and **Click →NEXT**
- You will then be asked to map your virtual network interfaces. Both interfaces will say Eth0 however the bottom interface is Eth1. Select the target network for each interface and **Click →NEXT**
- **DO NOT** tick the “Use Operating System Fixup”. **Click →NEXT**
- You will be asked to choose which network interface to use for the temporary transfer VM. Choose the Management interface usually Network 0 and leave the network settings on DHCP. **Click →NEXT**
- Review all the information and check the correct settings then. **Click →FINISH**
- Your VM will begin transferring virtual disk “jetNEXUS ALB-X” and once complete will show under your XenServer.
- Within your XenCenter client, you will now be able to see the new virtual machine.
- Right click on the VM and click **START**
- Your VM will then boot, a jetNEXUS boot screen will show on the console.
- You will then be presented with a logon to the VM.

Please refer to the **Basic Configuration** section below for further instructions:

## Basic Configuration

### First boot

On first boot jetNEXUS will boot and try to obtain an IP address via DHCP. If there is no DHCP server present it will boot with its default IP i.e. 192.168.100.100. On subsequent boots the DHCP client is disabled.

You have 3 ways to setup the jetNEXUS ALB-VA

### VM Command line configuration

### jetNEXUS Discovery

### jetNEXUS Web interface

The simplest way to initially configure the ALB-VA is via the jetNEXUS Discovery Application.

The jetNEXUS discovery application will scan the local network looking for ALB's and allow you to perform some basic configuration such as set a management IP/ default gateway etc.



## jetNEXUS Command line configuration

Many of the configuration settings can be made via the jetNEXUS command line interface. However for initial configurations it may be useful to change some of the basic network setting via the CLI.

```
Welcome to jetNEXUS(r) Accelerator
Copyright (c) 2005-2008 jetNEXUS Ltd.
All Rights Reserved.

localhost login: _
```

Log into the console with the following credentials

Username=admin

Password=jetnexus

Then run the following command:

```
Command:set greenside=192.168.12.150
```

To change the subnet mask:

```
Command:set mask eth0 255.255.0.0
```

You can check your changes by running the show command for example (show greenside IP)

If you need to change the default gateway you need to run the following command. In this example it will change it to 192.168.10.1. Be careful when changing the gateway remotely as if you get it wrong you may have a long drive!

```
Command:route add default gw 192.168.10.1_
```

To exit this CLI type **exit**

[Please refer to the ALB-X User Manual for further configuration details.](#)

## jetNEXUS Discovery

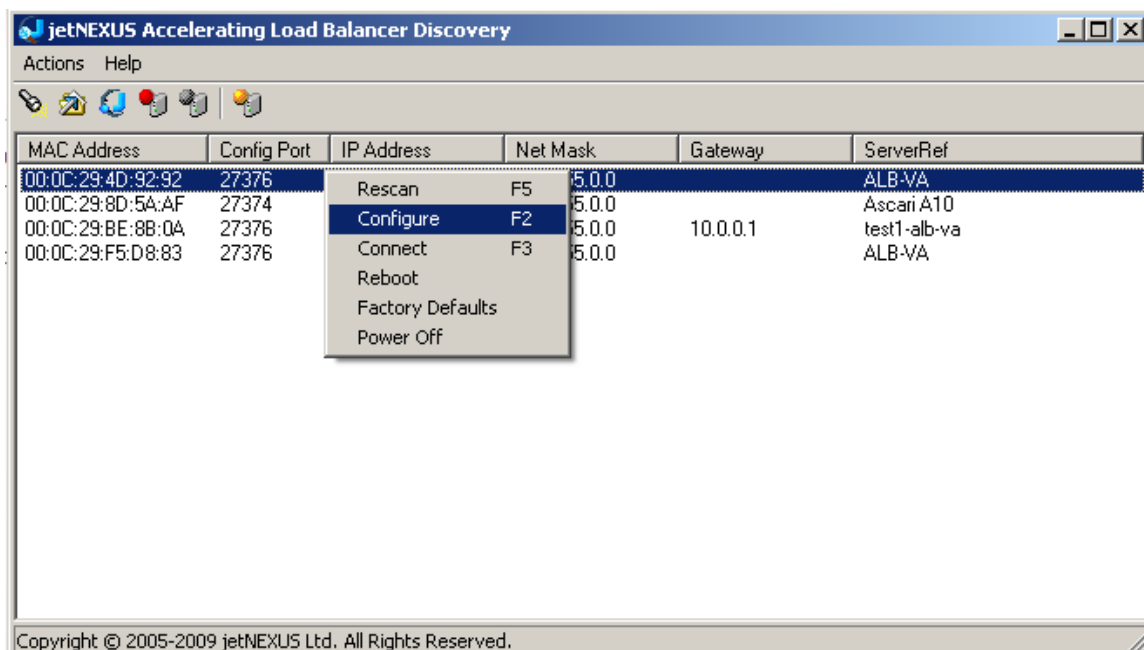
jetNEXUS Discovery is designed to make the initial configuration of the jetNEXUS ALB easy. The application can be installed onto a desktop and will scan the local network for jetNEXUS devices. Once found, essential information such as an initial management IP address can be easily assigned.

### How to use Discovery

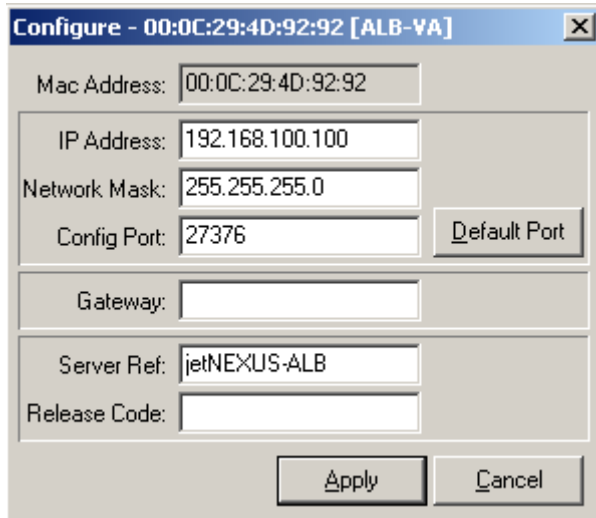
Copy the jetNEXUS application onto your desktop and run the installation. After the installation is complete double click on the Discovery Icon to launch the jetNEXUS discovery application.



The jetNEXUS Accelerating Load Balancer Discovery will then open, showing you a list of jetNEXUS appliances in your network.



Right click on the on device you would like to configure and select “configure”. A message box like the following below will then pop up.



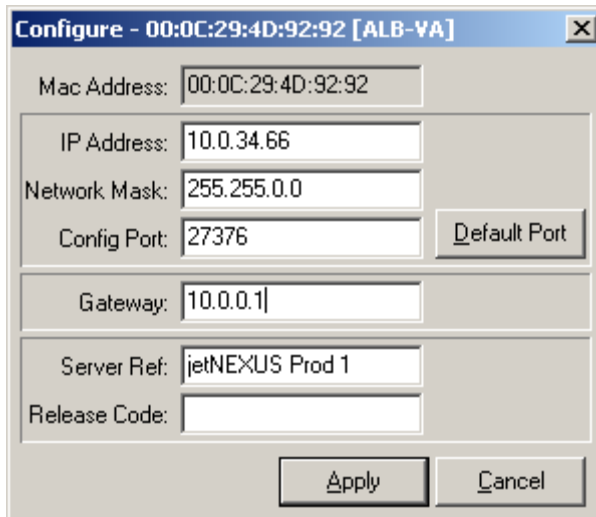
The dialog box is titled "Configure - 00:0C:29:4D:92:92 [ALB-VA]". It contains the following fields and buttons:

- Mac Address: 00:0C:29:4D:92:92
- IP Address: 192.168.100.100
- Network Mask: 255.255.255.0
- Config Port: 27376 (with a "Default Port" button next to it)
- Gateway: (empty field)
- Server Ref: jetNEXUS-ALB
- Release Code: (empty field)
- Buttons: Apply, Cancel

You will be prompted for the following information

IP Address:	The Management IP Address of the device
<b>Network Mask:</b>	The network Mask of the Device's management IP
<b>Configuration Port:</b>	The configuration port of the secure web interface
<b>Gateway:</b>	The Default gateway
Server Ref:	A name to identify the device

In this example we have configured the following details

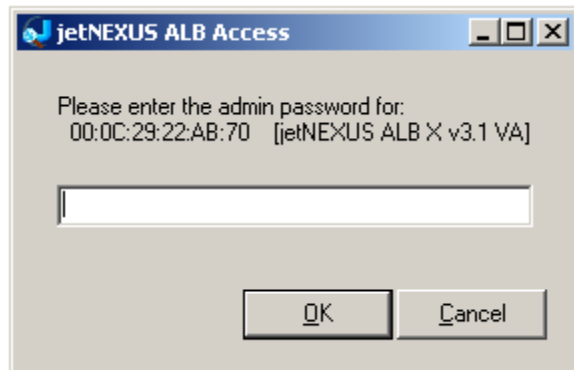


The dialog box is titled "Configure - 00:0C:29:4D:92:92 [ALB-VA]". It contains the following fields and buttons:

- Mac Address: 00:0C:29:4D:92:92
- IP Address: 10.0.34.66
- Network Mask: 255.255.0.0
- Config Port: 27376 (with a "Default Port" button next to it)
- Gateway: 10.0.0.1
- Server Ref: jetNEXUS Prod 1
- Release Code: (empty field)
- Buttons: Apply, Cancel

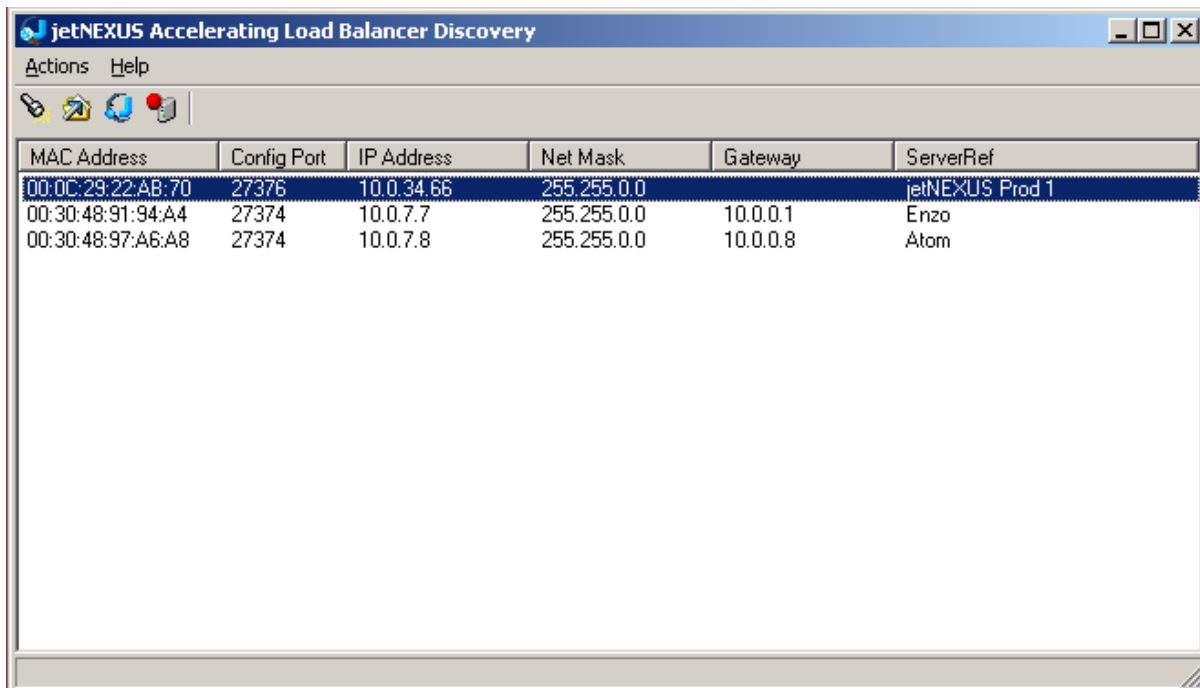
**IP Address:** 10.0.34.66  
**Network Mask:** 255.255.0.0  
**Configuration Port:** 2736 -Default  
**Gateway:** 10.0.0.1  
**Server Ref:** jetNEXUS Prod 1

Once you click on the apply button you will be prompted for the password:

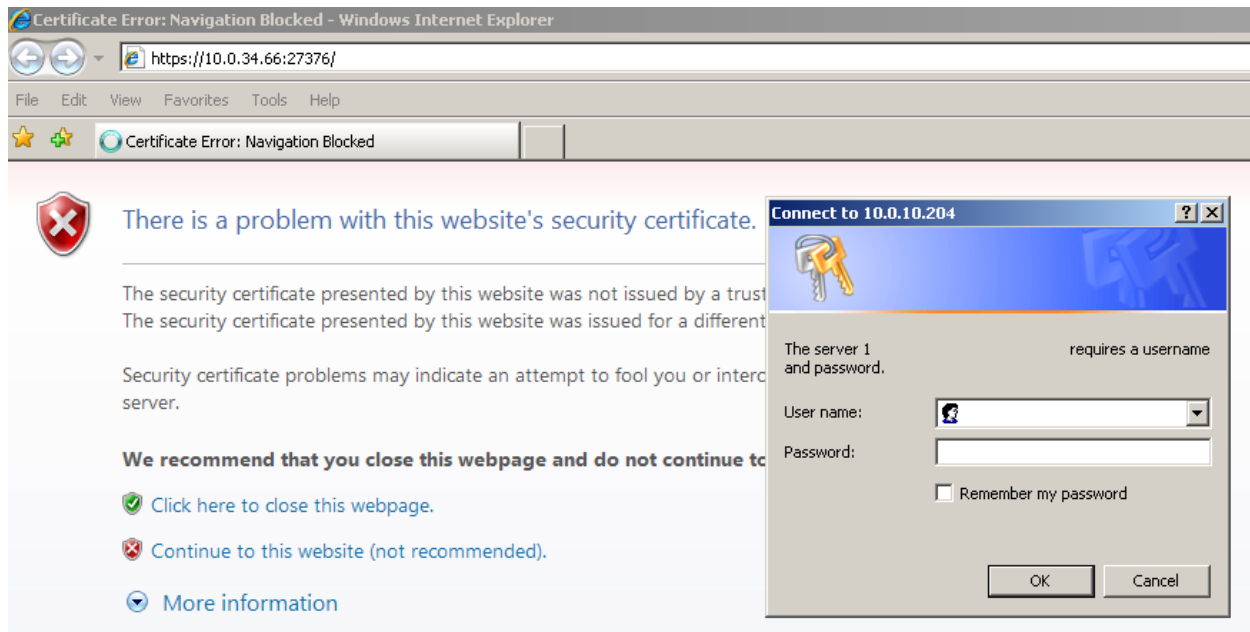


**Default password is:** jetnexus

Your Configured device with the new IP, Subnet and ServerRef will now show in the discovery screen.



Double click on the ALB you would like to configure and it will load the web admin in a browser:

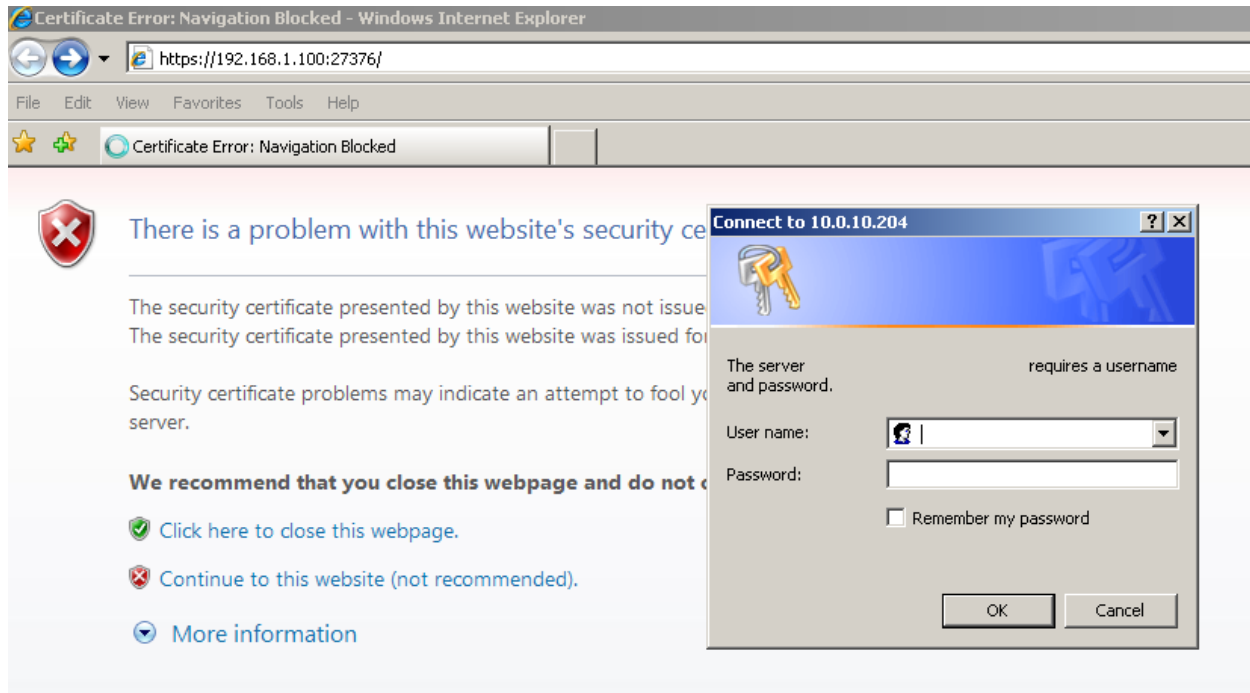


[Please refer to the ALB-X User Manual for further details on configuration.](#)

## Basic Configuration web interface

The web interface can be access via the following IP

<https://192.168.1.100:27376>



You will be challenged for a username and password:



**Username:** admin

**Password:** jetnexus

## Setting the IP address

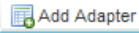
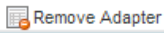

The first item to configure when setting up jetNEXUS ALB is the basic networking.

Using the Navigation bar on the left of the web interface go to (Setup → Appliance). This will

open the  **Appliance**  tab allowing you to set the IP Address for the unit.

You can now set the network properties:

**Adapter Details**






Adapter	IP Address	Subnet Mask	Description
eth0	192.168.1.100	255.255.255.0	Green Side

Double click on the IP Address box & Subnet mask to enter the IP and subnet, each section will turn blue allowing you to add IP and subnet information

IP Address	Subnet Mask
192.168.1.100	255.255.255.0

Your changes will be highlighted with a red triangle above them, then click on the update button to commit your changes.



Description	Web Console
Green Side	<input checked="" type="checkbox"/>

You also have to complete the Server Ref naming your appliance information:

**Appliance**

**Basic setup**

Server Ref:

DNS Server:

**Failover Enabled**

Failover Enabled: ☐

Failover Timer[mSecs]:

**Advanced Network Setting**

Server Nagle: ☐

Client Nagle: ☐

Once completed click on the Update button at the bottom right of the page:



## jetNEXUS Example

In this example we have configured the details below, and we are using a one-armed configuration Green side only.

**Server Ref:** jetNEXUS Prod 1  
**IP Address:** 10.0.34.66  
**Network Mask:** 255.255.0.0  
**DNS Server:** 10.0.1.2

Here we have set the IP address and subnet mask

Adapter	IP Address	Subnet Mask	Description
eth0	10.0.34.66	255.255.0.0	Green Side



Now set the serve ref appliance name and enter your DNS server

---

**Appliance**

**Basic setup**

Server Ref:

DNS Server:

**Failover Enabled**

Failover Enabled: ☐

Failover Timer[mSecs]:

Failover enabled when ticked enables the failover controls; this allows the appliance acts as a as part of a High-Availability cluster. When you have more than one jetNEXUS ALB and require high-availability failover, tick this box. However this will be discussed in more detail later on in this guide.

**Failover Enabled**

Failover Enabled: ☐

Failover Timer[mSecs]:

Server Nagle and Client Nagle can be enabled to pace connections where content is small. These options are not enabled as default, and should only enable on older slower networks.

**Advanced Network Setting**

Server Nagle: ☐

Client Nagle: ☐



This is not required for HTTP communications but can be beneficial with some protocols on a Layer 4 channel.

Once all information has been entered please use both update buttons




You have now configured the Appliance tab.

## Setting the Default Route

Using the Navigation bar on the left of the web interface, go to (Setup → Network) this will open the  **Network**  tab allowing you to add the Gateway and Static routing information.


On this screen we configure a default gateway and routing, you must set a Gateway IP Address.

**Default Route**

Default Gateway:    

In this example we have configured the Gateway IP of 10.0.0.1 on eth 0 once you have configured your gateway click the update button.

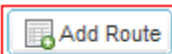
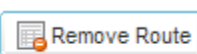
**Default Route**

Default Gateway:    

## Setting a Static route


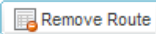

Static routes can be added by clicking on the “Add Route” button

**Static Routes**

You will need the destination address and mask, the gateway and adapter. Once the details are filled in, click update to action the settings. A tick is shown in the “Active” column when the route is implemented.



**Static Routes**

Destination	Gateway	Mask	Adapter	Active

You have now configured the Network tab.




## Setting the network speed

Using the Navigation bar on the left of the web interface, go to (Setup → Hardware) This will open the  **Hardware**  tab allowing you to set the Interface speeds.

The settings on this screen control the network access. The defaults are to fix speed at 100 Mbps and full duplex. This avoids any issue with certain networking devices that have auto-negotiation which re-negotiates too frequently.

The device can support speeds from 10 to 1000, for 1000 this should set to auto/auto. If this does not work, set the exact network hardware values.

**Interfaces**

 Add Records  Remove Records  Update

ETH Type	Speed	Duplex
eth0	100	Full Duplex
eth1	100	Full Duplex

Speed ▲

100 ▼

To change the values, click on Speed or Duplex.

If you have changed any of these settings click the update at the top of the screen.

You have now configured the Hardware tab.

[Please refer to the ALB-X User Manual for further details on configuration.](#)

## jetNEXUS Help

### Troubleshooting

Further help can be found on the jetNEXUS websites

<http://www.jetNEXUS.com/support.html>

<http://forum.jetNEXUS.com/>

### Contact Us

I hope you have found this Installation Guide informative, but if you need any clarification or further information, please do not hesitate to get in contact with jetNEXUS Support:

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