

Ionos VPS setup

This document provides instructions for creating a new VPS at Ionos. Before starting, however, you should confirm that Ionos allows the installation of 'qcow2' images. At the time of writing, Ionos is in the process of changing its back-end systems, and qcow2 installation is *not* supported, although this is likely to change.

Installation is not particularly straightforward, for these reasons:

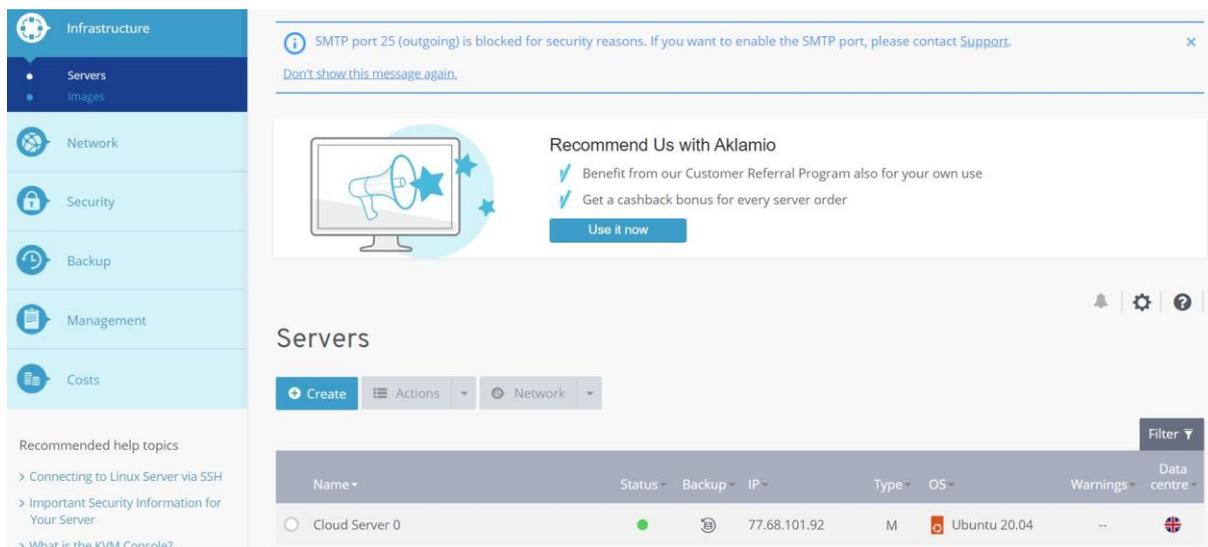
1. You must specifically ask technical support to open port 25 (this port is required by the mail server). They won't (or shouldn't) refuse to open it, but you are required to make the request
2. You cannot install custom (qcow2) images directly; you must first install a stock Linux image, and then re-install your qcow2 image, over-writing the stock image
3. You must delete the default Ionos firewall, and replace it with an empty firewall. The SwimAdmin image handles the firewall itself.

1 IMAGE INSTALLATION

Start installation by selecting [Servers](#), followed by [Virtual Private Servers \(VPS\)](#). One of the options on this page will be a 'VPS M', which has 2 CPUs ('vCores'), 2GB of RAM, and an 80GB SSD. The SwimAdmin image is for a 20GB server, and the remaining 60GB will be unused (in general, CPUs and RAM are expensive, and SSD disks are cheap).

Click on [Configure](#). You cannot directly install the SwimAdmin image at Ionos; you must instead initially install a stock (unmodified) Ubuntu 22.04 system, and then replace it. To install the stock image, select 'Linux' on the configuration page, and then set 'System' to Ubuntu 22.04. Do *not* select Plesk. Set a Data Centre location of 'United Kingdom', and set Cloud Backup to 'None'.

The Ionos site now requires you to add this to a basket, and go through a login and payment process. On completion, log in again if necessary, and select [Menu > Servers & Cloud](#). The cloud control panel will show the details of the Ubuntu 22.04 install. This takes about 15 or 20 minutes, and is unlikely to have completed. On completion, your control panel will show:



The screenshot shows the Ionos cloud control panel interface. On the left is a navigation sidebar with 'Infrastructure' selected, containing sub-items for Servers, Images, Network, Security, Backup, Management, and Costs. Below the sidebar are recommended help topics. The main content area features a notification about SMTP port 25 being blocked, a promotional banner for Aklamio, and a 'Servers' section. The 'Servers' section includes a 'Create' button and a table of existing servers. The table has columns for Name, Status, Backup, IP, Type, OS, Warnings, and Data centre. One server is listed: 'Cloud Server 0' with a green status dot, a backup icon, IP '77.68.101.92', Type 'M', OS 'Ubuntu 20.04', and a UK data centre icon.

Name	Status	Backup	IP	Type	OS	Warnings	Data centre
Cloud Server 0	●	🔄	77.68.101.92	M	Ubuntu 20.04	--	🇬🇧

Figure 1: default Ubuntu install

If you select 'Cloud Server 0' you can find the image details, such as the default root password; you can ignore these details, as you now need to *re-install* the image.

Before doing anything else, however, you should ask for port 25 to be opened, as this will be required by your mail server. The top of Figure 1 shows a message asking you to contact support. The phone number can be difficult to find, so you should follow the support link now. Select [Server & Cloud infrastructure](#) on the next page. At the bottom of the next page, you will see [Contact a Server & Cloud Expert](#); click it. Click [Show number](#) to get a phone number and a PIN, and ask for port 25 to be opened on your VPS.

To re-install the image, you must first import the correct (customised) SwimAdmin image. Go to <https://swimadmin.co.uk/data>, and copy a link to the most recent [qcow2](#) image. At the time of writing, this is <https://swimadmin.co.uk/data/swimvps-0623.qcow2>. In this example, '0623' is the release month and year.

On the cloud control panel, click [Images](#), and then [Create Image](#). Set an image name, and fill in the [Import](#) dialog as follows:

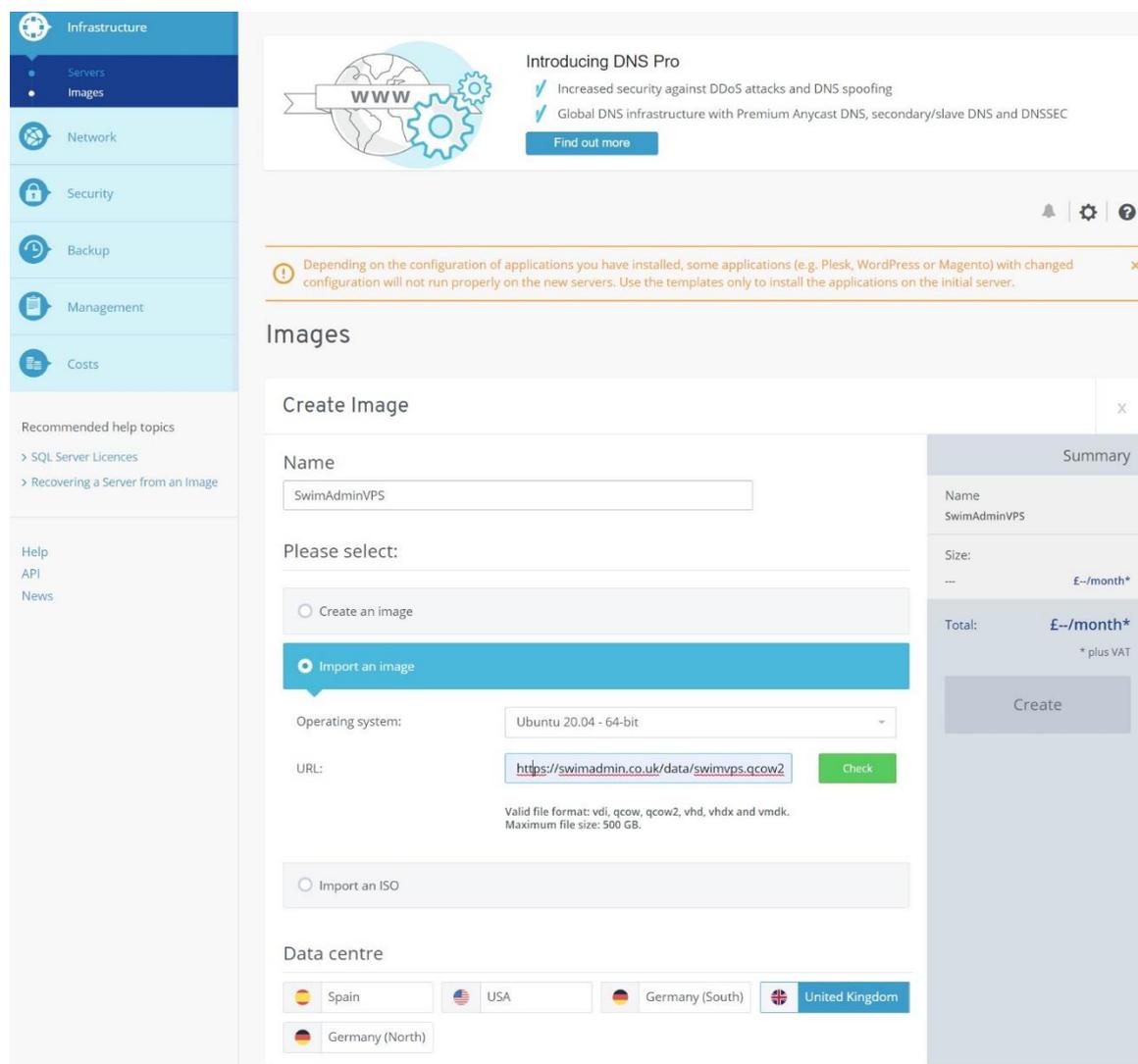


Figure 2: Import SwimAdmin image

The image name is unimportant, and is shown as `SwimAdminVPS` here. Set the operating system to `Ubuntu 22.04 - 64-bit` (Figure 2 shows Ubuntu 20.04; you can ignore this). The URL is shown as `https://swimadmin.co.uk/data/swimvps.qcow2` above, but you should instead use the link to the most recent image that you found above.

Now click `Check`. The pricing block should then show a few pence a month, and the `Create` button is enabled. Click this to start the upload, which may take several minutes to complete.

On completion, click on `Servers` in the left menu, and select your server name (which will probably be 'Cloud Server 0' if you didn't change the default server name). In the `Actions` menu, select `Reinstall image`:

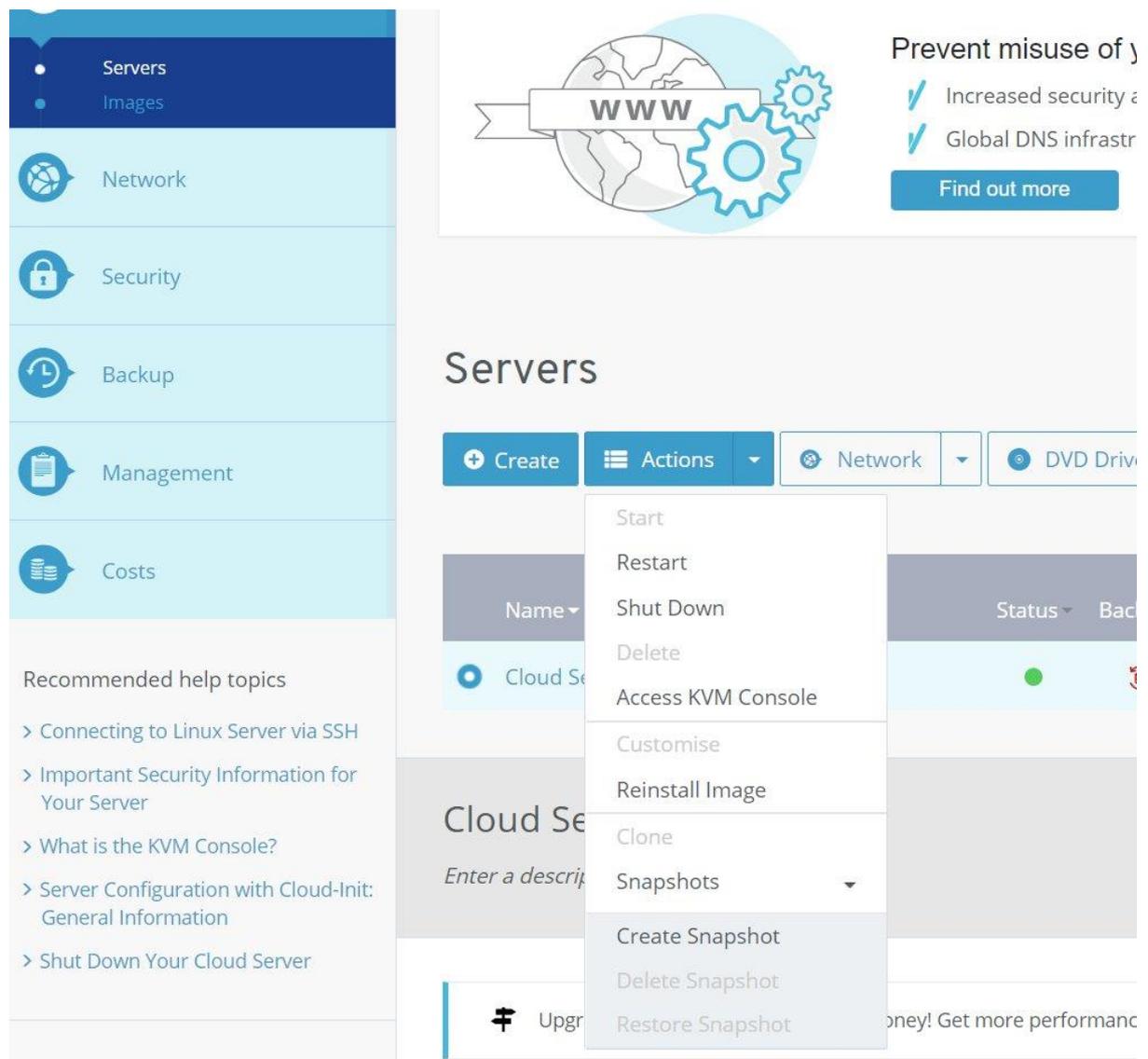


Figure 3: Ionos reinstall image

In the new Images screen, select `My Images`. The SwimAdmin image you just uploaded will be visible. Click on it, and then click on `Reinstall Image`. Note that the old stock Ubuntu image is no longer needed, and will be destroyed; it doesn't need to be backed up.

The re-install should take 10 or 15 minutes. On completion, click on [Network](#) in the left menu. If you click on the [Public IP](#) sub-menu you will see the IP address of your new server; make a note of it. In the text below, this is generally shown as `77.69.12.104`, or `77.68.11.156`, or something similar. **Wherever you see these addresses, you should replace them with the address you have recorded here.**

2 FIREWALL

Now click on the Network [Firewall Policies](#) sub-menu. The default Ionos firewall must be replaced with one on the server itself. To do this, you must first create a new empty firewall. Click [Create](#), and fill in the details as shown. Note that the new firewall has been named 'SwimAdminVPS'. The Protocol must be set to 'ANY':

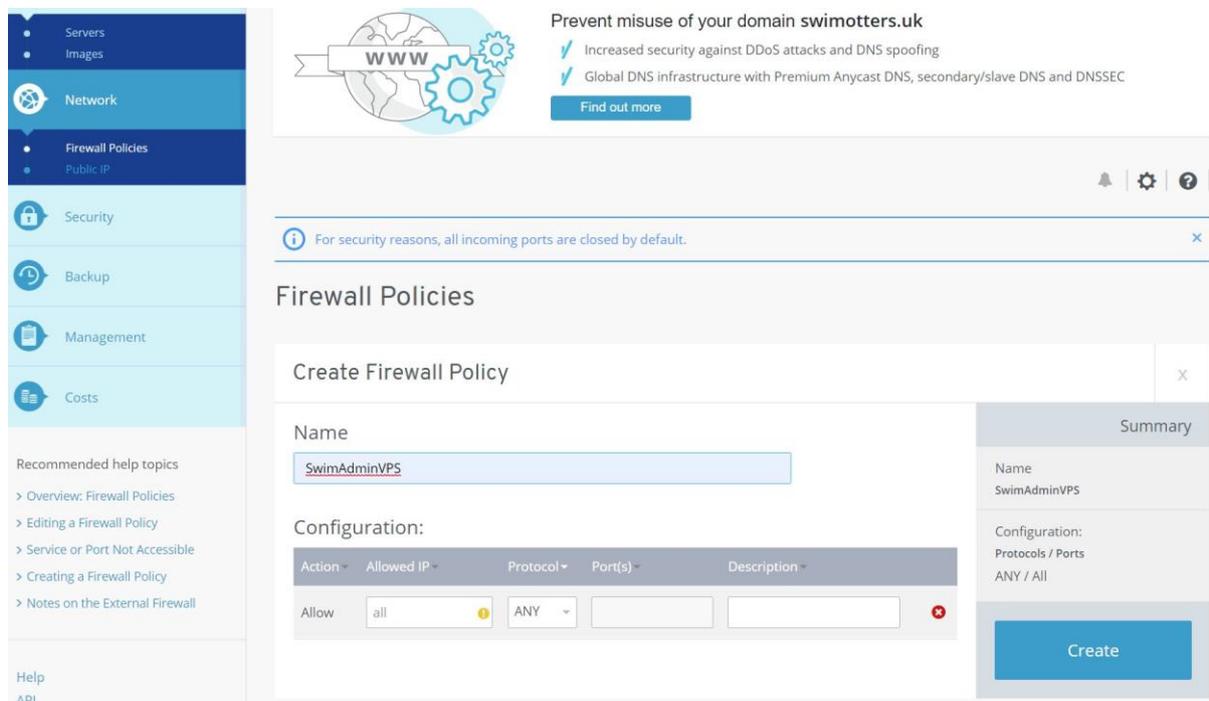


Figure 4: Ionos create firewall

Click [Create](#). You now have two firewall policies, named 'Linux' and 'SwimAdminVPS'. Select 'SwimAdminVPS', click [Assign](#) in the 'Configuration' section, select the name of your server, and then [Save Changes](#):

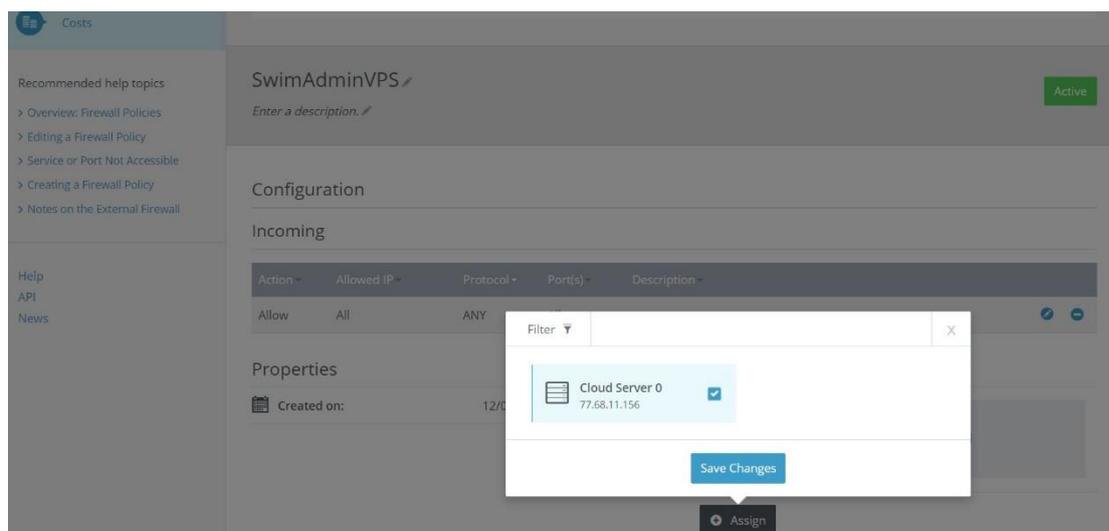


Figure 5: Assign new firewall

On completion, you can select the original firewall ('Linux'), and delete it.

3 REVERSE DNS

You now have to set up reverse DNS. The normal ('forward') DNS allows a domain name (such as `myswimclub.uk`) to be converted to an IP address, to allow your server to be located. Reverse DNS, as the name suggests, does the opposite. Email service providers (such as Gmail and Outlook) will generally do a reverse lookup on the IP address they received incoming mails from, and confirm that the returned domain name corresponds to the claimed source domain name in the email. If there is a mismatch, the email is likely to be rejected as spam. *The IP address of your server is owned by the VPS provider, so this action has to be carried out at the VPS provider, rather than the DNS provider.*

To set up reverse DNS, select **Network** in the left menu, and then **Public IP**, and then select your server. The screen now shows a Reverse DNS entry. Click the pencil icon to edit it. The text entry field should be set to `swimvps.myswimclub.uk`, where you of course have to replace the `myswimclub.uk` portion with your own domain name. Leave the `swimvps.` prefix unmodified:

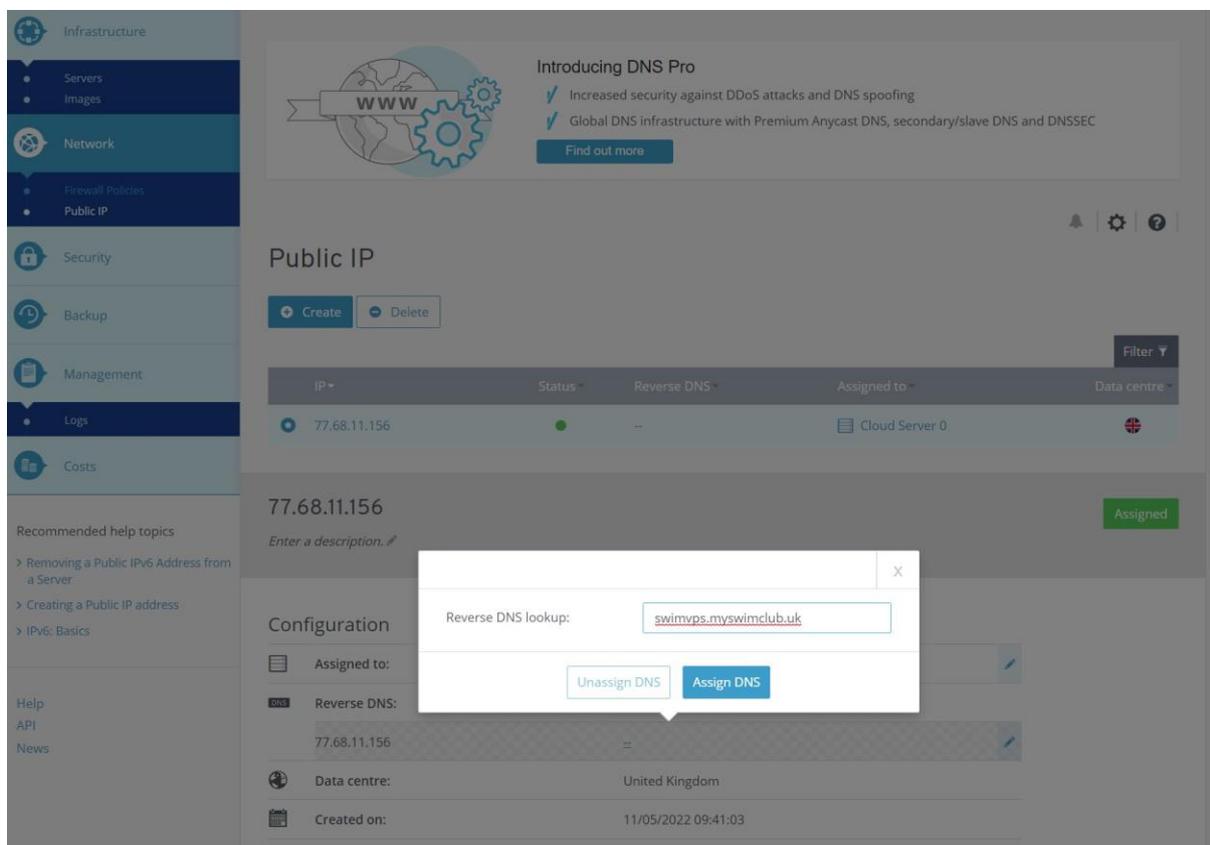


Figure 6: Reverse DNS

Now click **Assign DNS**. You should get a success message stating that the reverse DNS entry has been assigned to your IP address.

This completes the VPS installation.