

# Configure Cloud

This section is the part of the OnApp installation procedure.

[Install Control Panel Server](#) > [Install Compute Resources](#) > [Install Data Stores](#) > [Install Backup Server](#) > [Configure vCloud Director Integration](#) > **Configure Cloud**

Once you've set up your hardware, the final step is to configure your cloud in your Control Panel. This section explains how to configure a basic cloud. If you complete these steps you should be in a position to create VSs.

## 1. Configure Control Panel Settings

Once you have installed OnApp, you need to make the necessary Control Panel configurations. Set the [system](#), [backups/templates](#), [interface](#) and [defaults](#) CP options.

## 2. Configure Compute Resources

To deploy virtual servers, you need to add [compute zones](#) and [compute resources](#) to your cloud. After that, [attach the newly created compute resource to the compute zone](#) you've added:

- Xen compute resources can be assigned to compute zones of the Virtual and Baremetal types
- KVM compute resources can be assigned to compute resources of the Virtual and Smart types
- vCloud Director compute resources can be assigned to compute zones of the VPC type
- VMware vCenter compute resources can be assigned to compute zones of the Virtual type

Make sure to enable Integrated storage in the **Settings** > **Configuration** to group compute resource drives together into a virtual data store. Also, to use Integrated Storage, select the compute zone as a storage API endpoint.

## 3. Configure Data Stores

To provide your virtual servers with storage space, you need to configure [data store zones](#) and data stores. Data stores can be [Traditional/Centralized SAN](#) and [OnApp Storage/Integrated SAN](#). You should also [attach the new data store to the data store zone](#) you've added.

In case of Traditional storage you need to configure data store(s) on your compute resource. The commands below use `/dev/sda5` as an example. You can find the volume group identifier we're using in the second command, from the **Data Stores** screen in the Control Panel. Follow these steps for each local storage block on the compute resource:

```
bash#> pvcreate --metadatasize=50M /dev/sda5
bash#> vgcreate onapp-ar0akk2wyer3tf /dev/sda5
```

## 4. Configure Networks

To provide IP address(es) to your future virtual servers, you need to perform the necessary network configurations. To do this, create [network zones](#) and [networks](#). When adding the network, select the network zone you've created. The network will be automatically attached to the network zone you chose during creation. You should also [add a range of IP addresses to the new network](#).

## 5. Configure Backup Servers

If you plan to use backup servers to store such items as, for example, templates, ISOs or backups, you need to add [backup servers](#) and [backup server zones](#) to your cloud. After that, [attach the newly created backup server to backup server zone](#) you've added.

## 6. Configure Relations Between Entities

Once you've added all the necessary resources to your cloud, you need to associate them with the compute resource you've created in Step 2. For this, [assign the data store \(Step 3\)](#) and [network \(Step 4\)](#) to the compute resource or compute zone (Step 2). You also need to assign backup server(s) (Step 5) to [compute resources](#) or [compute zones](#). All data stores, networks and backup servers you assign to a compute zone or resource should be from zones with the same type as the compute zone or resource. Zones can have one of the following types: Virtual, Baremetal, Smart or VPC:

- *VPC type*: to the compute zones and resources of this type you can assign external, org and vApp networks from the VPC type network zones and data stores from the VPC type data store zones. All vCloud Director related resources have the VPC type.
- *Smart type*: to the compute zones and resources of this type you can assign networks from the Smart type network zones and LVM, Integrated storage and SolidFire data stores from the Smart type data store zones.

- *Virtual type*: to the compute zones and resources of this type you can assign networks from the Virtual type network zones and LVM, Integrated storage, VMware and SolidFire data stores from the Virtual type data store zones.
- *Baremetal type*: to the compute zones and resources of this type you can assign networks from the Baremetal type network zones.

## 7. Configure Templates

To build Linux virtual servers you need to download templates using the UI downloader. For this, [install XEN and KVM templates](#) and [create a template store](#). You should also add the installed templates to that template store.

## 8. Configure ISOs

To be able to later build and boot VSs from ISOs, additional steps are required. For more information refer to the [Additional Considerations for ISOs](#) section.