Anti Affinity Layers

Introduction

Anti Affinity Layers are a means of isolating virtual machines from each other, through enforcement of policy, this is commonly known as "Anti Affinity" by a number of technology vendors.

Virtual machines, when placed in a layer, will be **isolated from other virtual machines in that same layer**, by means of deployment of these virtual machines on different physical machines in our local infrastructure.

Currently, you we support up to **four virtual machines** in a layer (that is to say, we support seperation of only up to four physical machines).

Create an Anti-affinity Layer

Design your layers carefully:

- You cannot rename a layer when there are deployed virtual machines in the layer
- You cannot move a deployed machine into a layer with a virtual machine deployed on the same physical machine

To add a new layer, click the "Add Layer" button. Enter the layer name:
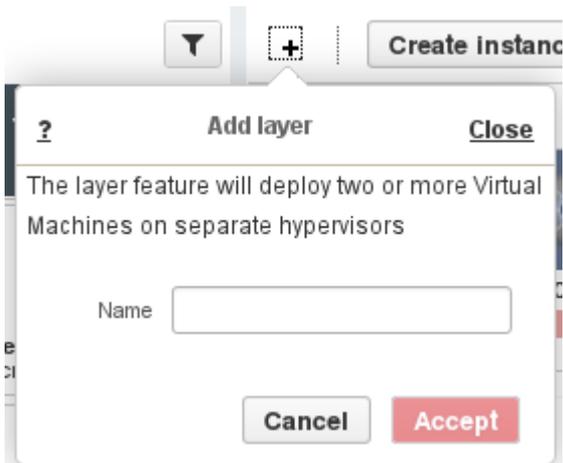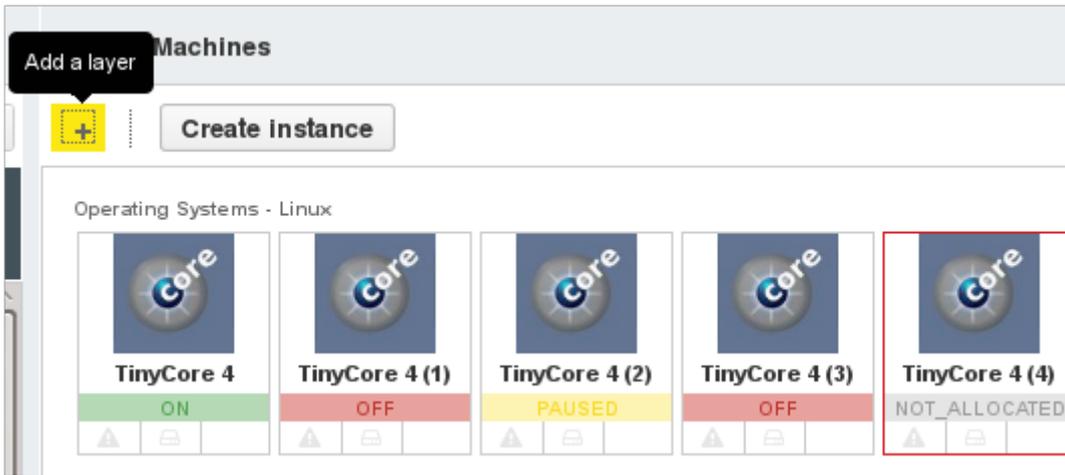
Create all the layers you require for your virtual appliance.

Add virtual machine templates or virtual machines to the layer using drag and drop.

Layers ensure that virtual machines deploy on separate physical machines, so the following rules apply:
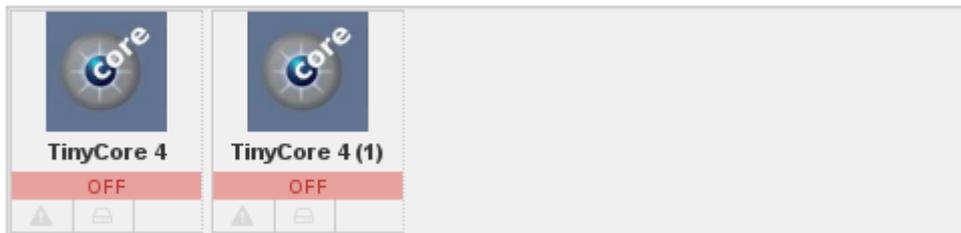
For a new layer:
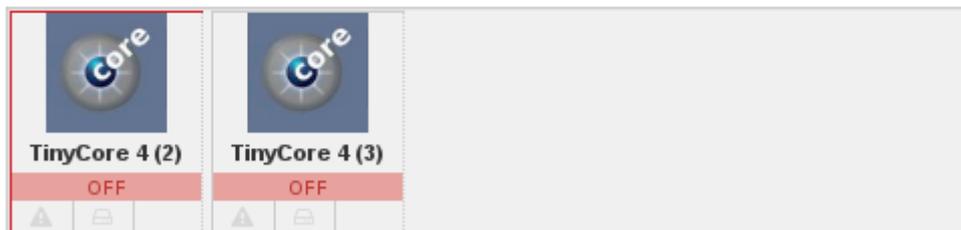You can add any VM to a new layer

For a layer with deployed VMs:

- You can add a VM that is not deployed
- You can add a powered-off VM if it deployed on a different physical machine from the other VMs in the layer

App Servers 🖉

DB Servers 🖉

For moving a machine to different layer:

You cannot move a deployed VM directly to a different layer. First, power off the machine and remove the machine from the old layer, then delete the old layer. Now you will be able to add the machine to a different layer, make sure to save the changes to your virtual appliance.

When you deploy the virtual appliance, ensure you keep to within the maximum number of supported machines per layer (see above).

Checking separate deployments:

You can see the remote access (console) address on the virtual machine details panel. A quick way of checking that the virtual machines are deployed on separate physical machines is to check the remote access address of the virtual machine, which should be different for each physical machine.

Modifying a layer

You cannot make changes to layers that may compromise anti-affinity while your virtual machines are deployed or running.

Renaming a layer

To change the name of the layer, first check that no machines in the layer are deployed.

Check that you have saved your changes to the virtual appliance. After saving, the virtual machines that are not deployed will be marked with a plus icon.

Move the mouse over the layer and click the configuration button .
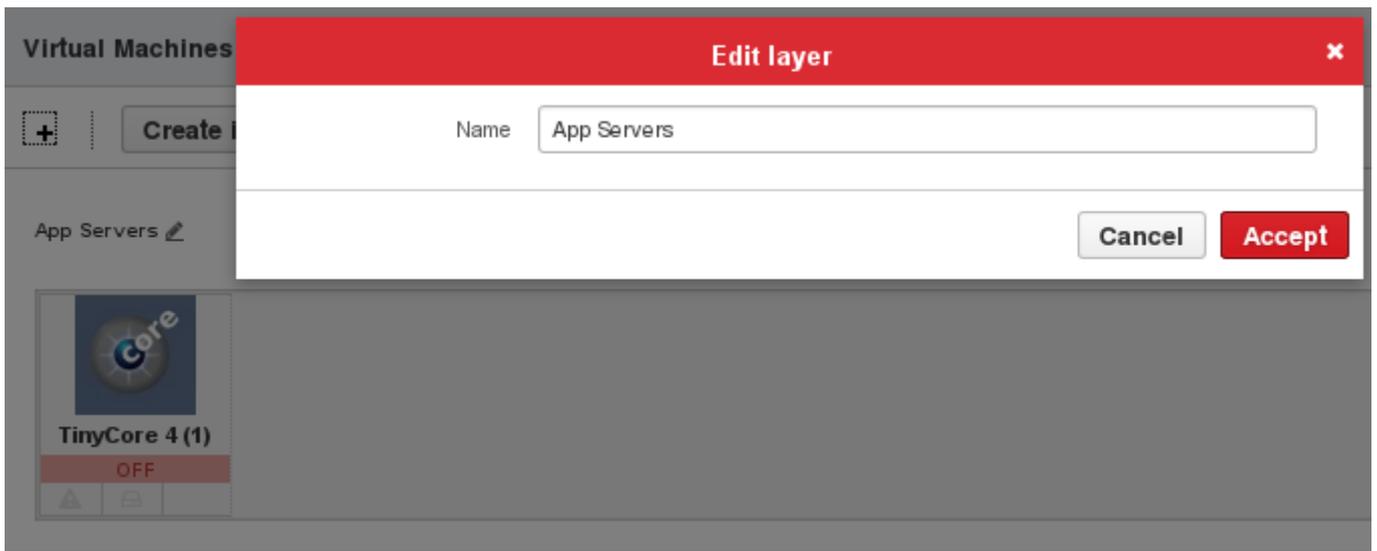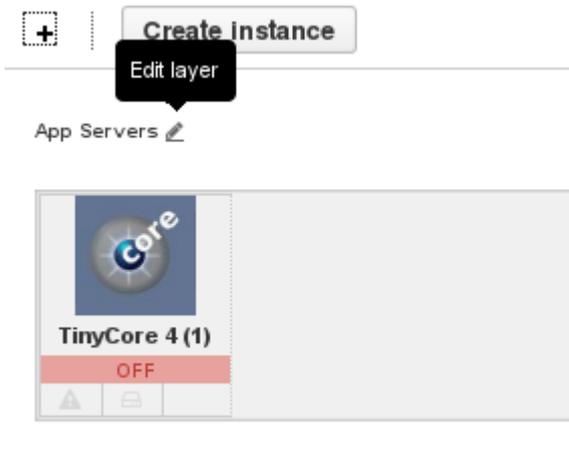
Enter the new layer name and save changes to the virtual appliance.

Remove Machines that are Not Deployed from a layer

To remove a virtual machine that is not deployed from an anti-affinity layer, move the mouse over the virtual machine and click the delete button or drag the machine outside the layer and into the general virtual machine area. Don't forget to save the changes to the virtual appliance.

Remove Machines that are Deployed from a layer

To remove a deployed virtual machine from a layer, first power off the virtual machine and drag it out of the layer into the general virtual machine area. Then save the virtual appliance.

Remove multiple machines that are Deployed from a layer

To remove multiple deployed virtual machines from a layer, first power off all the virtual machines you want to remove. If you do not power off all the machines first, after removing each machine, you will have to save the virtual appliance to re-enable the power button on the control panel.

Asynchronous Power Off

You do not have to wait for a virtual machine to power off fully before powering off other machines. After clicking the power button, you can close the virtual machine control panel and then go to the next virtual machine in the layer and power it off too. Drag each of the virtual machines out of the layer one by one and save the virtual appliance.

Delete an Anti-affinity Layer

Layers with deployed virtual machines must be deleted differently to layers with no deployed virtual machines.

Delete a Layer Without Deployed Virtual Machines

If none of the virtual machines in a layer are deployed, you can delete the layer directly.

Click on the delete button on the left handside.

The layer will be deleted and the virtual machines will be moved to the general virtual machine area.

Delete a Layer with Deployed Virtual Machines

To delete a layer that contains deployed virtual machines, first power off all the virtual machines, then remove all the virtual machines from the layer, you can now delete the layer.

Delete a Layer Before it is Empty

You can delete a layer if only one virtual machine remains, even if the virtual machine is deployed and powered on. The virtual machine will remain powered on and it will be moved to the general virtual machine area.

Move Machines Between Layers

You cannot move a deployed machine directly from one layer to another.

To move a deployed machine to a different layer, first power off the virtual machin, then move the virtual machine to the general virtual machine area and save the virtual appliance.

If the new layer does not already exist, create the new layer, then add the virtual machine to the new layer
and save the virtual appliance.