

## How to Configure High Availability CC-Managed CloudGen Firewalls for Virtual Routing Using a Repository Entry

<https://campus.barracuda.com/doc/79463123/>

When configuring VRF for two CC-managed firewalls, the box level configuration for both firewalls must be identical, except for the **Network**, **Box Properties**, and **Licensing** pages. Furthermore, both the names of all virtual router instances and the **VR Instance IDs** must match each other on both firewalls.


If the names of all virtual router instances and the **VR Instance IDs** do not match each other on both HA boxes, a failover to the secondary firewall will not work!





### Before You Begin

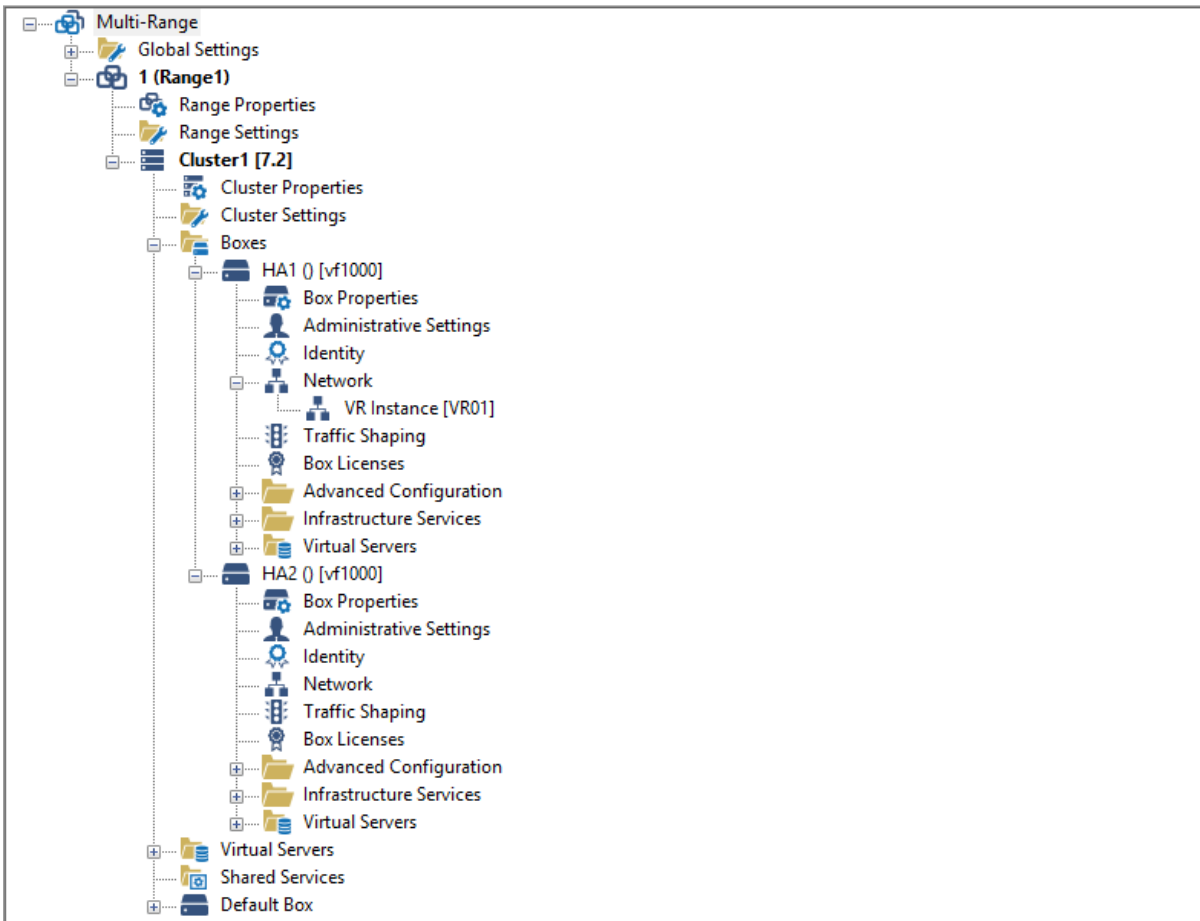
Verify that two firewalls are configured to be controlled by the Control Center for operating in high availability mode. For more information, see [How to Configure a High Availability Cluster for Managed CloudGen Firewalls](#).

Verify that your primary firewall is configured for running at least one virtual router instance. For more information, see [How to Configure and Activate a Virtual Router Instance with Hardware, Virtual, VLAN, or Bundled Interfaces](#).

The following example assumes that there is already one virtual router instance configured on the primary firewall that serves as the basis for managing the VRF configuration for both HA partners using a repository entry. The name of the VR Instance is VR01, the ID = 1. In case there are multiple virtual router instances configured, you must execute the following steps for each additional virtual router instance. In this setup the firewall service will be transparent to the additional virtual router instance only if authenticated users are not defined. All other services are not available to the additional virtual router. For more information on which services are available for additional virtual instances, see [Virtual Routing and Forwarding \(VRF\)](#).

CONTROL **CONFIGURATION** DATABASE ADMINS STATISTICS EVENTS NETWORK ACCESS CLIENT 

Configuration Tree  State Info  Activate  Undo  Disconnect



## Step 1. Create a Cluster Repository

Execute this step only if a cluster repository is missing!

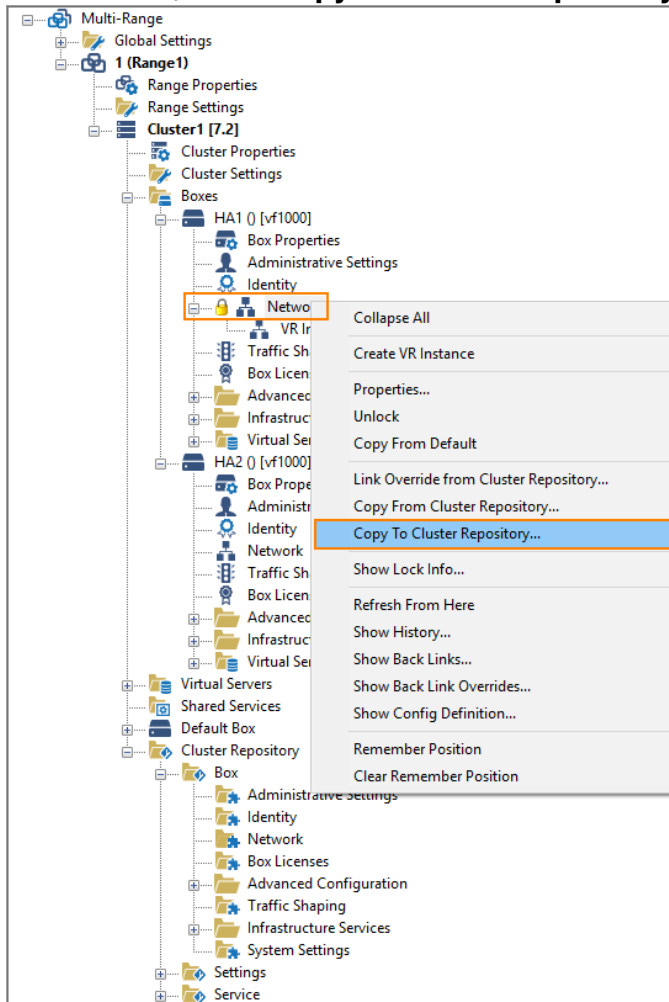
1. Right-click **CONFIGURATION > Configuration Tree > Multi Range > your range > your cluster** .
2. From the list, select **Create Repository**.
3. Click + to expand the **Cluster Repository** node.
4. Click + to expand the **Box** node.
5. Click **Activate**.
6. The **Activate Changes** window is displayed.
7. **Click Activate**.

## Step 2. Create a Network Node in the Repository

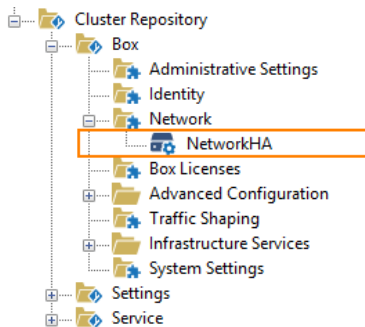
Execute this step only if a network node has not been added yet according to this description!

Because there is already a VR instance running on the primary firewall, the configuration will serve as a template to create a repository node.

1. Right-click **CONFIGURATION > Configuration Tree > Multi Range > your range > your cluster > Boxes > your primary HA box > Network**.
2. From the list, select **Lock**.
3. Right-click **CONFIGURATION > Configuration Tree > Multi Range > your range > your cluster > Boxes > your primary HA box > Network**.
4. From the list, select **Copy to Cluster Repository...**



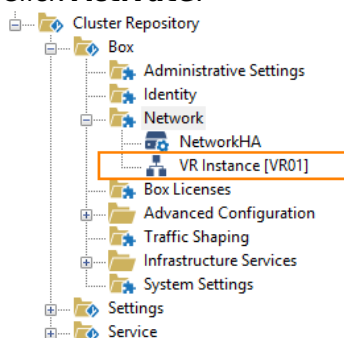
5. The **Select Object** window is displayed
6. Enter a name for the new repository object, e.g., NetworkHA.
7. Click **OK**.
8. Click **Activate**.
9. The **Activate Changes** window is displayed.
10. Click **Activate**.



### Step 3. Create a Virtual Router Instance Node in the Repository

A clean VR instance template is required for configuring the VR instance that will feed both HA partners with network configuration information.

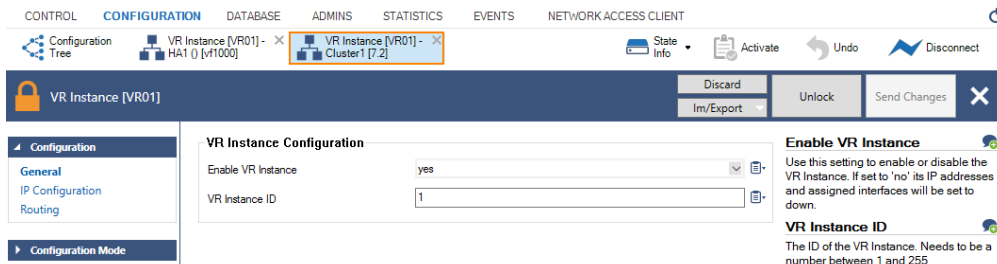
1. Right-click **Cluster Repository** > **Network**.
2. From the list select **Lock**.
3. Right-click **Cluster Repository** > **Network**.
4. In the list, select **Create VR Instance**.
5. The **Create a new VR Instance** window is displayed.
6. Enter the same name for the new repository entry as for your VR instance on your primary box, e.g. VR01.
7. Click **OK**.
8. Click **Activate**.
9. The **Activate Changes** window is displayed.
10. Click **Activate**.



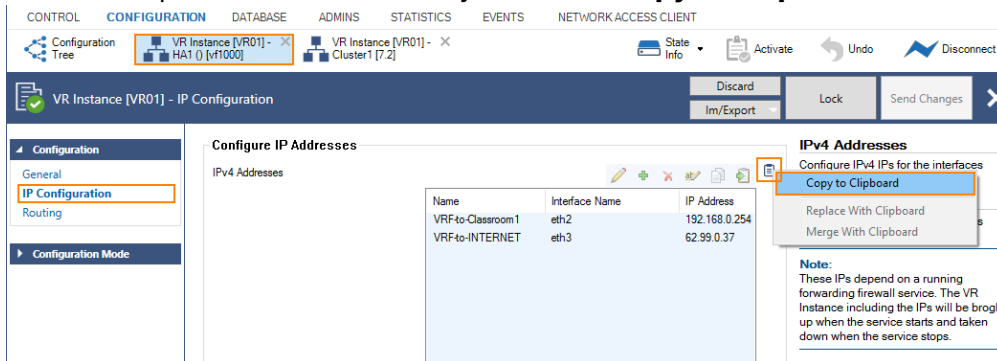
### Step 4. Copy VR Instance Data from the Primary Box to the VR Instance Cluster Node

The configuration of the VR instance on the primary firewall is the basis for the repository entry that must be identical for both HA partners. The interface and routing configuration must be transferred to the VR instance node in the repository.

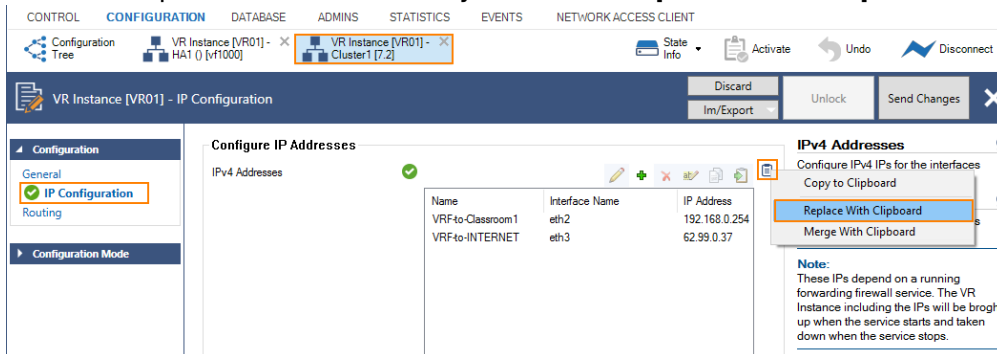
1. Go to **CONFIGURATION > Configuration Tree > Multi Range > your range > your cluster > Boxes > your primary HA box > Network > VR Instance [ your virtual router instance ]**.
2. The **VR Instance configuration** of the primary box is displayed.
3. Click **Lock**.
4. Go to **CONFIGURATION > Configuration Tree > Multi Range > your range > your cluster > Cluster Repository > Box > Network > VR Instance [ your virtual router instance ]**.
5. The recently created VR Instance entry is displayed.
6. Click **Lock**.



7. In the ribbon bar, click **VR Instance[ your virtual router instance ]**.
8. In the left menu, click **IP Configuration**.
9. The **Configure IP Addresses** window is displayed.
10. Click the clipboard icon followed by a click on **Copy to Clipboard**.



11. In the ribbon bar, click **VR Instance[ your virtual router instance ] - your cluster**.
12. In the left menu, select **IP Configuration**.
13. The **Configure IP Addresses** window is displayed.
14. Click the clipboard icon followed by a click on **Replace With Clipboard**.

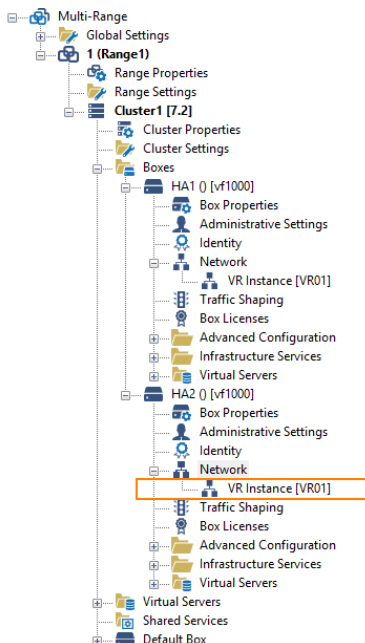


15. In the ribbon bar, click **VR Instance[ your virtual router instance ]**.
16. In the left menu, click **Routing**.

17. The **Configure IP Addresses** window is displayed.
18. Click the clipboard icon followed by a click on **Copy to Clipboard**.
19. In the ribbon bar, click **VR Instance[ *your virtual router instance* ] - *your cluster*** .
20. In the left menu, select **Routing**.
21. The **Configure IP Addresses** window is displayed.
22. Click the clipboard icon followed by a click on **Replace With Clipboard**.
23. Click **Send Changes**.
24. Click **Activate**.

## Step 5. Create a VR Instance Node for the Secondary Box

1. Go to **CONFIGURATION > Configuration Tree > Multi Range > your range > your cluster > Boxes > your secondary HA box** .
2. Right-click **Network**.
3. From the list, select **Create VR Instance**.
4. The **Create a new VR Instance** window is displayed.
5. Enter the same name for the virtual instance as already configured for your primary box, e.g., VR01
6. Click **OK**.
7. Click **Activate**.
8. The **Activate Changes** window is displayed.
9. Click **Activate**.

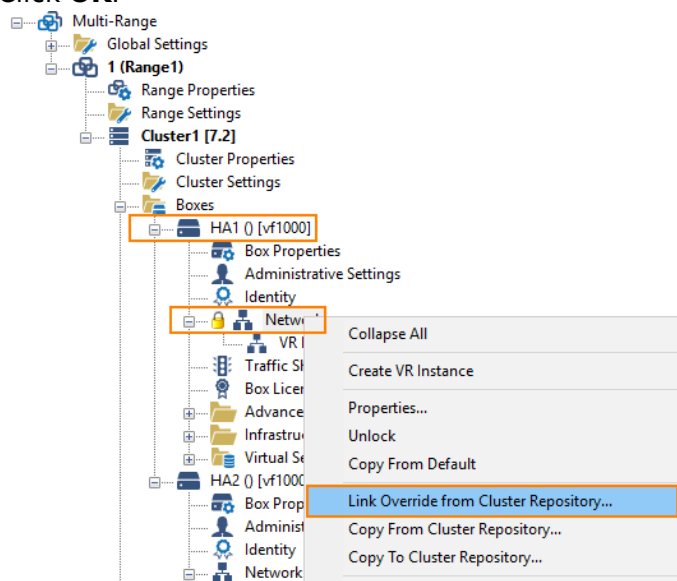


## Step 6. Link the Common Network Repository Nodes to Both HA Partners

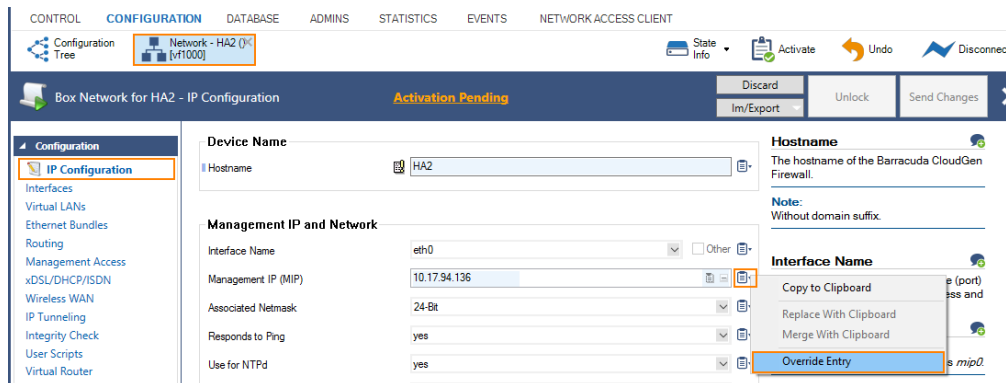
Execute this step only if the repository network node has not been linked yet according to this

description!

1. Right-click **CONFIGURATION > Configuration Tree > Multi Range > your range > your cluster > Boxes > your primary HA box > Network**.
2. From the list, select **Lock**.
3. Right-click **CONFIGURATION > Configuration Tree > Multi Range > your range > your cluster > Boxes > your primary HA box > Network**.
4. From the list, select **Link Override from Cluster Repository**.
5. The **Select Object** window is displayed.
6. In the tree inside of the window, select the network node that you created in your repository before, e.g., NetworkHA.
7. Click **OK**.



8. Right-click **CONFIGURATION > Configuration Tree > Multi Range > your range > your cluster > Boxes > your secondary HA box > Network**.
9. Click **Lock**.
10. Right-click **CONFIGURATION > Configuration Tree > Multi Range > your range > your cluster > Boxes > your secondary HA box > Network**.
11. From the list, select **Link Override from Cluster Repository**.
12. The **Select Object** window is displayed.
13. In the tree inside of the window, select the network node that you created in your repository before, e.g., NetworkHA.
14. Double-click the link to the repository you just created.
15. For the **Management IP (MIP)**, click the clipboard icon to the right of the edit field and select **Override Entry**.



16. Enter the original **Management IP (MIP)** of the secondary box into the edit field.
17. Click **Send Changes**.
18. Click **Activate**.
19. The **Activate Changes** window is displayed.
20. Click **Activate**.

### Step 7. Re-activate the New Network Configuration on Your Secondary HA Firewall

1. Log into your secondary HA firewall.
2. Go to **CONTROL > Box**.
3. In the left menu bar, expand **Network**.
4. Click **Activate new network configuration**.
5. The **Network Activation** windows is displayed.
6. Click **Failsafe**.

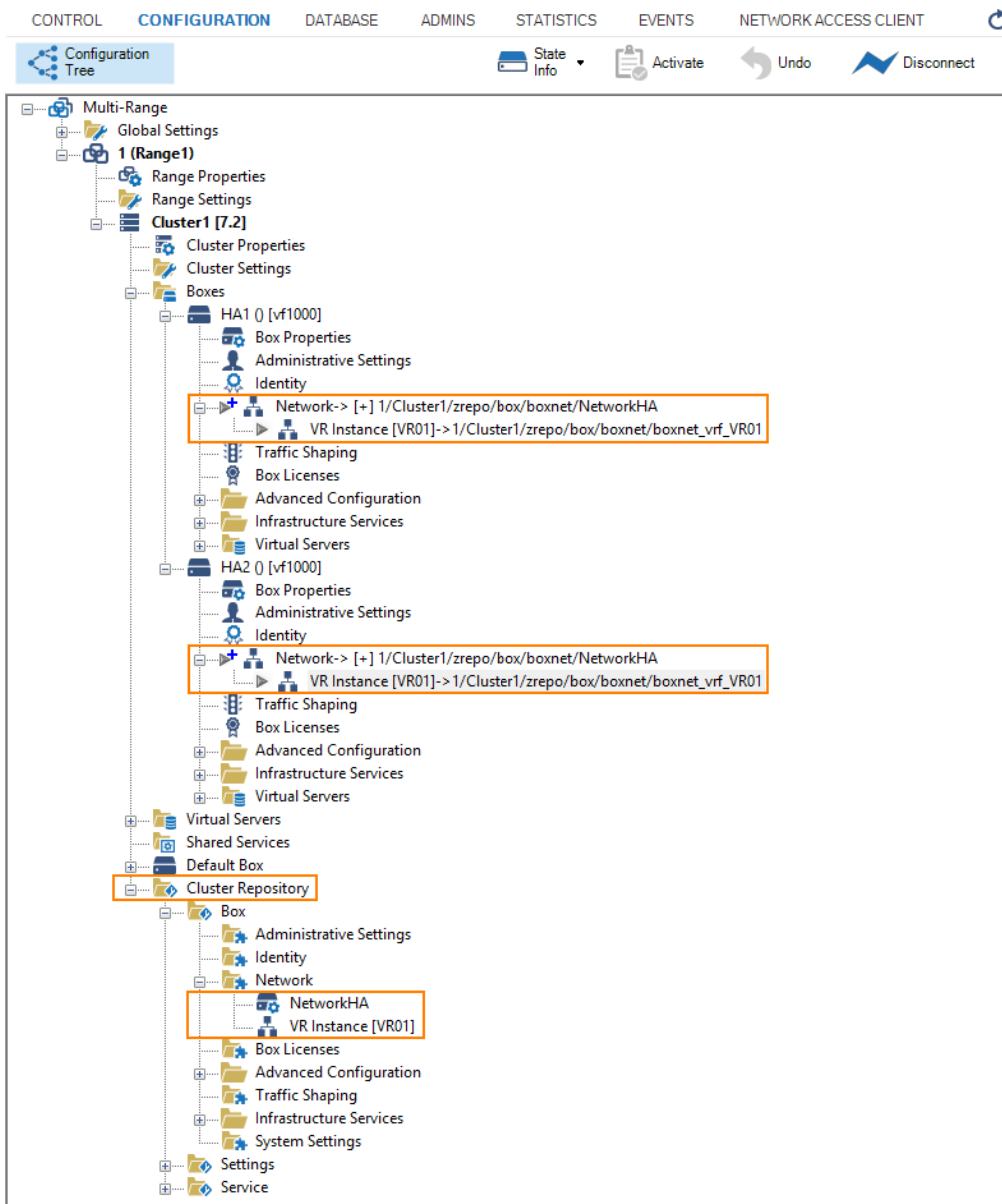
### Step 8. Link the VR Instance Node from the Repository to the Corresponding Nodes for Both Firewalls

1. Right-click **CONFIGURATION > Configuration Tree > Multi Range > your range > your cluster > Boxes > your primary HA box > Network > VR Instance [ your virtual router instance ]**.
2. Select **Lock**.
3. Right-click **CONFIGURATION > Configuration Tree > Multi Range > your range > your cluster > Boxes > your primary HA box > Network > VR Instance [ your virtual router instance ]**.
4. In the list, click **Link From Cluster Repository**.
5. The **Select Object** window is displayed.
6. In the tree inside of the window, select the **VR Instance [ your virtual instance ]** that you created in your repository before.
7. Right-click **CONFIGURATION > Configuration Tree > Multi Range > your range > your cluster > Boxes > your secondary HA box > Network > VR Instance [ your virtual router instance ]**.
8. Select **Lock**.
9. Right-click **CONFIGURATION > Configuration Tree > Multi Range > your range > your**



**cluster > Boxes > your secondary HA box > Network > VR Instance [ your virtual router instance ].**

- 10. In the list, click **Link From Cluster Repository**.
- 11. The **Select Object** window is displayed.
- 12. In the tree inside of the window, select the **VR Instance [ your virtual instance ]** that you created in your repository before.
- 13. Click **Activate**.
- 14. The **Activate Changes** window is displayed.
- 15. Click **Activate**.



## Figures

1. vrf\_base\_for\_HA\_via\_repo.png
2. vrf\_repo\_create\_network\_node.png
3. vrf\_repo\_network\_node\_created.png
4. vrf\_repo\_vr\_instance\_node\_created\_in\_repo.png
5. vrf\_vr\_instance\_ready\_to\_be\_copied.png
6. vrf\_copy\_instance\_data\_to\_clipboard.png
7. vrf\_paste\_instance\_data\_from\_clipboard.png
8. vrf\_vr\_instance\_created\_on\_secondary\_box.png
9. vrf\_link\_override\_for\_primary.png
10. vrf\_override\_repo\_entry.png
11. vrf\_repo\_setup\_complete.png

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