

V-Series Appliance Upgrade When WCG Is In Cluster Mode

Topic 60028 / Updated: 10-February-2011

Applies To:	Websense V-Series appliance v7.5 Websense Content Gateway v7.5
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This article is an essential supplement for customers upgrading clustered V-Series appliances from version 1.2.3 to version 7.5.0 and from 7.5.x to the next in the 7.5 release sequence.

This article supplements the V-Series Upgrade instructions bundled with the version 7.5 patch (and that are posted in the Websense.com Technical Library, link above). For general version 7.5 upgrade guidelines, see [Upgrading V-Series Appliances to Version 7.5](#). Please read both documents before following the instructions in this supplement.



Important

It is strongly recommended that you perform a full backup of each appliance before upgrade. Should an upgrade fail, you can upgrade over an appliance re-image, and then restore the configuration from the backup.

The following upgrade scenarios are described in this document:

Scenario 1: Upgrade with Content Gateway service disruption: Members of the cluster are upgraded sequentially, restarted, and then Content Gateway services are stopped until all upgrades are complete. Then Content Gateway is started on all members of the cluster.

Scenario 2: Upgrade without Content Gateway service disruption: Members of the cluster are upgraded sequentially. As the upgrade proceeds, the cluster is divided into 2 clusters, the old and the new. When the upgrade is complete, only the new cluster remains.

Scenario 1: Upgrade with Content Gateway service disruption

In this procedure, after a node is upgraded and restarted, Content Gateway services are stopped and remain stopped until all members of the cluster are upgraded. This procedure has the advantage of simplicity.

Cluster upgrade steps:

1. Follow the V-Series Upgrade instructions.
 - a. Log on to the Appliance Manager.
 - b. Navigate to Administration > Patch Management.
 - c. Upgrade the appliance.
 - d. Restart the appliance as requested.
2. After the restart is complete, when all services are available, immediately stop the Content Gateway services.
 - a. Log on to the Appliance Manager.
 - b. Navigate to Status > Modules.
 - c. In the Websense Content Gateway area, click Stop Services.
 - d. When prompted, click OK to continue.



Note

If Virtual IP is enabled, for a short time there will be an IP address conflict. After Content Gateway services are stopped, the conflict goes away.

3. Repeat steps 1 and 2 for every node in the cluster.
4. When all nodes have been upgraded, start the Content Gateway services on each node.
 - a. Log on to the Appliance Manager.
 - b. Navigate to Status > Modules.
 - c. In the Websense Content Gateway area, click Start Services.

Scenario 2: Upgrade without a Content Gateway service disruption

In this upgrade scenario, members of the cluster are upgraded sequentially. As the upgrade proceeds, the cluster is divided into 2 clusters, those on the old version, and those on the new. When the upgrade is complete, only the new cluster remains.

When virtual IP is not used

When virtual IP is used

When virtual IP is not used

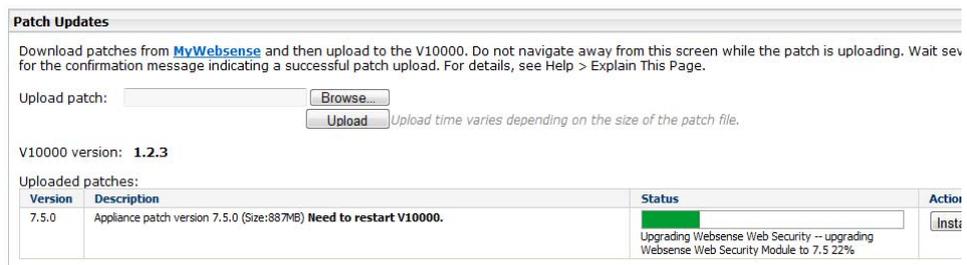
Use this procedure when the cluster does not use Content Gateway's Virtual IP feature.

Cluster upgrade steps:

1. Disable the cluster feature on one of the nodes to remove it from cluster.
 - a. Log on to the **Content Gateway Manager**.
 - b. Navigate to **Configure > My Proxy > Basic > Clustering**.
 - c. In the **Cluster Type** area, select **Single Node**.
 - d. Click **Apply**.
 - e. **Restart** Content Gateway.



2. For each node that has been removed from the cluster, in the Appliance Manager, on the **Appliance Patch Management** page, upgrade the appliance. Follow the [V-Series Upgrade](#) instructions.



3. When the upgrade is complete, enable the cluster feature on the removed node.
 - a. Log on to the **Content Gateway Manager**.
 - b. Navigate to **Configure > My Proxy > Basic > Clustering**.
 - c. In the **Cluster Type** area, select the appropriate cluster type (**Full cache or Management**).
 - d. Click **Apply**.

- e. **Restart** Content Gateway.



Note

A new cluster has been established.

4. Repeat steps 1 through 3 for the remaining nodes in the cluster.

When virtual IP *is* used

There is not a perfect procedure for upgrading appliances in this scenario. To maintain valid Virtual IPs, each node should be removed from the cluster with Virtual IP enabled. However, the cluster feature should be disabled on the node first. But an IP conflict occurs when the cluster is disabled. Therefore, the cluster feature and virtual IP must be disabled at the same time.

Cluster upgrade steps:

1. On a node to be removed and upgraded, disable the cluster feature and the Virtual IP feature at the same time.
 - a. Log on to the Content **Gateway Manager**.
 - b. Navigate to **Configure > My Proxy > Basic > Clustering**.
 - c. In the **Cluster Type** area, select **Single Node**.
 - d. Click **Apply**.
 - e. Navigate to **Configure > My Proxy > Basic > General**.

- f. Select **Off** for **Virtual IP** (to disable the feature on restart) and then **Restart** Content Gateway. Clustering and Virtual IP are disabled simultaneously during restart.



Important

Do *not* click **Apply** between turning off Virtual IP and restarting the proxy.

Feature
Protocols
FTP
HTTPS
Networking
ARM
WCCP
DNS Proxy
Virtual IP
Data Security



Note

The node is now removed from the cluster and the Virtual IP addresses allocated to the node have been taken over by other nodes in the cluster.

2. In the **Appliance Manager**, on the **Appliance Patch Management** page, upgrade the appliance. Follow the [V-Series Upgrade](#) instructions.
3. When the upgraded appliance has fully started and all services are running, enable the cluster feature on the upgraded node.
 - a. Log on to the **Content Gateway Manager**.
 - b. Navigate to **Configure > My Proxy > Basic > Clustering**.
 - c. In the **Cluster Type** area, select the appropriate type (**Full cache or Management**).
 - d. Click **Apply**.
 - e. **Restart** Content Gateway.



Important

Do *not* enable Virtual IP on the upgraded node.

4. One-by-one, perform steps 1 through 3 to upgrade the other nodes in the cluster *until there is only one node left*.

**Note**

At this point, all of the upgraded appliances form a new cluster. The Virtual IP feature is still not enabled. Only one node remains in the old cluster (which belongs to the old version) and that node has all of the virtual IP addresses. The remaining steps complete the upgrade process.

5. Disable Virtual IP on the node that has not been upgraded and then enable Virtual IP in the new, upgraded cluster.
 - a. Log on to the **Content Gateway Manager**.
 - b. Navigate to **Configure > My Proxy > Basic > General**.
 - c. Select **Off** or **On for Virtual IP** to disable or enable Virtual IP addressing.
 - d. Click **Apply**.

**Note**

The Virtual IP feature is now active in the new cluster. There may be a brief Content Gateway service disruption while the feature initializes.

The remaining steps upgrade the last cluster node on the old version.

6. Disable the cluster feature on the last node.
 - a. Log on to the **Content Gateway Manager**.
 - b. Navigate to **Configure > My Proxy > Basic > Clustering**.
 - c. In the **Cluster Type** area, select **Single Node**.
 - d. Click **Apply**.
 - e. **Restart** Content Gateway.
7. Upgrade the last node. Follow the [V-Series Upgrade instructions](#).
8. Add the last node to the new cluster.
 - a. On the now upgraded node, log on to the **Content Gateway Manager**.
 - b. Navigate to **Configure > My Proxy > Basic > Clustering**.
 - c. In the **Cluster Type** area, select the appropriate type (**Full cache or Management**).
 - d. Click **Apply**.
 - e. **Restart** Content Gateway.
 - f. If Virtual IP is disabled, enable Virtual IP.

The upgrade process is complete.