Application Note: Manually upgrading and removing Veritas Cluster Server

Solaris

5.0 Maintenance Pack 3 Rolling Patch 4

Symantec

Application Note: Manually upgrading and removing Veritas Cluster Server

Product version: 5.0 MP3 RP4

Document version: 5.0MP3RP4.0

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Contents

Chapter 1

Performing a full upgrade to 5.0 MP3 RP4 on a VCS cluster

This chapter includes the following topics:

Performing a full upgrade to 5.0 MP3 RP4 on a VCS cluster

The following procedure describes performing a full upgrade on a VCS cluster.

To perform a full upgrade to 5.0 MP3 RP4 on VCS cluster:

1. Log in as superuser.
2. List the service groups in your cluster and their status. On any node, type:

   ```
   # hagrp -state
   ```

3. Take the ClusterService service group offline if it is running. On any node, type:

   ```
   # hagrp -offline -force ClusterService -sys nodename
   ```

4. Make the VCS configuration writable. On any node, type:

   ```
   # haconf -makerw
   ```

5 Freeze all service groups. On any node, type:

```
# hagrp -freeze service_group -persistent
```

where *service_group* is the name of the service group. Note that the ClusterService group cannot be frozen.

6 Save the configuration (`main.cf`) file with the groups frozen. On any node, type:

```
# haconf -dump -makero
```

7 Make a backup copy of the current main.cf and all types.cf configuration files. For example, on one node in the cluster, type:

```
# cp /etc/VRTSvcs/conf/config/main.cf \
/etc/VRTSvcs/conf/main.cf.save.50MP3RP2
# cp /etc/VRTSvcs/conf/config/types.cf \
/etc/VRTSvcs/conf/types.cf.save.50MP3RP2
```

8 Shut down VCS. On any node, type:

```
# /opt/VRTSvcs/bin/hastop -all -force
```

9 Shut down CmdServer. On each node, type:

```
# /opt/VRTSvcs/bin/CmdServer -stop
```

10 Verify that VCS has shut down. On any node, type:

```
# /sbin/gabconfig -a
```

The output resembles:

```
GAB Port Memberships
Port a gen 23dc0001 membership 01
```

The output shows no membership for port h.

11 For Solaris 10, on nodes that run non-global zones, check if the non-global zones are in the running state. Boot the non-global zones that are not in the running state.

- Check the zone's state. On each node, type:

  ```
  # zoneadm list -icv
  ```

- Boot the zone if it is not in the running state. On each node, type:

```
# zoneadm -z zone boot
```

where *zone* is the name of the non-global zone.

12 Unconfigure vxfen if the VCS cluster uses the fencing option. On each node, type:

```
# /sbin/vxfenconfig -U
```

13 Unload vxfen. On each node, perform the following steps:

- Identify the vxfen kernel module, for example:

```
# modinfo|grep vxfen
210 7ba44000 39488 258 1 vxfen (VRTS Fence 5.0 MP3 RP2)
```

- Unload vxfen using the module number.

```
# modunload -i 210
```

14 Unconfigure GAB. On each node, type:

```
# /sbin/gabconfig -U
```

15 Unload GAB. On each node, perform the following steps:

- Identify the GAB kernel module. For example:

```
# modinfo | grep gab
149 50cc6000 2b451 112 1 gab (GAB device 5.0 MP3 RP2)
```

- Unload GAB using the module number:

```
# modunload -i 149
```

16 Unconfigure LLT. On each node, perform the following steps:

- Type:

```
# /sbin/lltconfig -U
```

- Type **y** on each node in response to the message.

17 Unload LLT. On each node, perform the following steps:

- Identify the LLT kernel module. For example:

```
# modinfo | grep llt
147 50ca4000 d6bc 110 1 llt (LLT 5.0 MP3 RP2)
```

- Unload LLT using the module number:

```
# modunload -i 147
```

18 Change directory to the Veritas Cluster Server patches directory on the disc.

19 Add the VCS 5.0 MP3 RP4 patches. On each node, type:

- For Solaris SPARC 8:

```
# patchadd 139356-04
```

- For Solaris SPARC 9:

```
# patchadd 139357-04
```

- For Solaris SPARC 10:

```
# patchadd 139359-04
# patchadd 139358-04
# patchadd 142607-04
```

- For secure clusters, on Solaris SPARC 8, 9, 10, check if 123722-02 patch is already installed. If not installed and, add the 5.0 MP3 RP2 Authentication Service patch.

```
# patchadd 123722-02
```

- For Solaris SPARC 8, 9, 10, add the 5.0 MP3 RP4 VCS agent patches if their base package is installed.
  For VRTSvcsor or VRTScsocw packages:

```
# patchadd 141284-04
```

  For VRTSvcsdb package:

```
# patchadd 141285-04
```

  For VRTSvcssy package:

```
# patchadd 141286-04
```

- For Solaris x64:

```
# patchadd 139360-04
# patchadd 139361-04
# patchadd 142608-04
```

- For Solaris x64, add the 5.0 MP3 RP4 VCS agent patches if their base package is installed.
  For VRTSvcsdb package:

  ```
  # patchadd 141287-04
  ```

  For VRTSvcsor or VRTScsocw packages:

  ```
  # patchadd 141288-04
  ```

  For VRTSvcssy package:

  ```
  # patchadd 141289-04
  ```

20 Verify that the patches have been installed. On each node, type:

```
# showrev -p | grep VRTS
```

21 If the cluster has NFS or NFSRestart resources, copy the nfs_preonline and nfs_postoffline files to the `/opt/VRTSvcs/bin/triggers` directory:

```
# cp /opt/VRTSvcs/bin/sample_triggers/nfs_preonline \
/opt/VRTSvcs/bin/triggers
# cp /opt/VRTSvcs/bin/sample_triggers/nfs_postoffline \
/opt/VRTSvcs/bin/triggers
```

22 Implement the new type level changes from `/etc/VRTSvcs/conf/types.cf` file to `/etc/VRTSvcs/conf/config/types.cf` file.

23 Verify that the configuration is valid by running following command:

```
# hacf -verify /etc/VRTSvcs/conf/config
```

24 If you received any error messages when you unloaded the LLT, GAB, or VXFEN modules, you must reboot all the nodes in the cluster.

25 If you do not perform step 24, start the following VCS components manually. On each node, type:

```
# /sbin/lltconfig -c
# /sbin/gabconfig -cx
# /sbin/vxfenconfig -c
# /opt/VRTSvcs/bin/hastart
```

Note: You do not have to start vxfen unless you use the fencing option.

---

26 After VCS has started, perform the following steps:

- Verify all resources have been probed. On any node, type:

  ```
  # hastatus -summary
  ```

- Unfreeze all service groups. On any node, type:

  ```
  # haconf -makerw
  # hagrp -unfreeze service_group -persistent
  ```

  where *service_group* is the name of the service group. You need to run this command for each service group that is frozen at step 5:

  ```
  # haconf -dump -makero
  ```

27 Bring the ClusterService service group online, if necessary. On any node type:

```
# hagrp -online ClusterService -sys nodename
```

Chapter 2

Removing 5.0 MP3 RP4 from Veritas Cluster Server

This chapter includes the following topics:

Removing 5.0 MP3 RP4 from Veritas Cluster Server

Use the following procedure to remove VCS 5.0 MP3 RP4 from your cluster manually.

To remove 5.0 MP3 RP4 from VCS manually

1. List the service groups in your cluster and their status. On any node, type:

   ```
   # hagrp -state
   ```

2. Take the ClusterService service group offline if it is running. On any node, type:

   ```
   # hagrp -offline -force ClusterService -sys system
   ```

3. Make the VCS configuration writable. On any node, type:

   ```
   # haconf -makerw
   ```

4. Freeze all service groups. On any node, type:

   ```
   # hagrp -freeze service_group -persistent
   ```

   where *service_group* is the name of the service group. Note that the ClusterService group cannot be frozen.

5 Save the configuration (`main.cf`) file with the groups frozen. On any node, type:

```
# haconf -dump -makero
```

6 Make a backup copy of the current main.cf and all types.cf configuration files. For example, on one node in the cluster, type:

```
# cp /etc/VRTSvcs/conf/config/main.cf \
/etc/VRTSvcs/conf/main.cf.save.50MP3RP4
# cp /etc/VRTSvcs/conf/config/types.cf \
/etc/VRTSvcs/conf/types.cf.save.50MP3RP4
```

7 Shut down VCS. On any node, type:

```
# /opt/VRTSvcs/bin/hastop -all -force
```

8 Shut down CmdServer. On each node, type:

```
# /opt/VRTSvcs/bin/CmdServer -stop
```

9 Verify that VCS has shut down. On any node, type:

```
# /sbin/gabconfig -a
```

The output resembles:

```
GAB Port Memberships
Port a gen 23dc0001 membership 01
```

The output shows no membership for port h.

10 For Solaris 10, on nodes that run non-global zones, check if the non-global zones are in the running state. Boot the non-global zones that are not in the running state.

- Check the zone's state. On each node, type:

  ```
  # zoneadm list -icv
  ```

- Boot the zone if it is not in the running state. On each node, type:

  ```
  # zoneadm -z zone boot
  ```

  where *zone* is the name of the non-global zone.

Note: Do not configure one or more Solaris zones to boot from the shared storage.

11 Unconfigure vxfen if the VCS cluster uses the fencing option. On each node, type:

```
# /sbin/vxfenconfig -U
```

12 Unload vxfen. On each node, perform the following steps:

- Identify the vxfen kernel module, for example:

```
# modinfo|grep vxfen
210 7ba44000 39488 258 1 vxfen (VRTS Fence 5.0 MP3 RP4)
```

- Unload vxfen using the module number.

```
# modunload -i 210
```

13 Unconfigure GAB. On each node, type:

```
# /sbin/gabconfig -U
```

14 Unload GAB. On each node, perform the following steps:

- Identify the GAB kernel module. For example:

```
# modinfo | grep gab
149 50cc6000 2b451 112 1 gab (GAB device 5.0 MP3 RP4)
```

- Unload GAB using the module number:

```
# modunload -i 149
```

15 Unconfigure LLT. On each node, perform the following steps:

- Type:

```
# /sbin/lltconfig -U
```

- Type **y** on each node in response to the message.

16 Unload LLT. On each node, perform the following steps:

- Identify the LLT kernel module. For example:

```
# modinfo | grep llt
147 50ca4000 d6bc 110 1 llt (LLT 5.0 MP3 RP4)
```

- Unload LLT using the module number:

```
# modunload -i 147
```

17 Remove the VCS 5.0 MP3 RP4 patches. On each node, type:

- For Solaris SPARC 8:

```
# patchrm 139356-04
```

- For Solaris SPARC 9:

```
# patchrm 139357-04
```

- For Solaris SPARC 10:

```
# patchrm 139359-04
# patchrm 139358-04
# patchrm 142607-04
```

- For Solaris SPARC 8, 9, 10, add the 5.0 MP3 RP4 VCS agent patches if their base package is installed.
  For VRTSvcsor or VRTScsocw packages:

```
# patchrm 141284-04
```

  For VRTSvcsdb package:

```
# patchrm 141285-04
```

  For VRTSvcssy package:

```
# patchrm 141286-04
```

- For Solaris x64:

```
# patchrm 139360-04
# patchrm 139361-04
# patchrm 142608-04
```

- For Solaris x64, add the 5.0 MP3 RP4 VCS agent patches if their base package is installed.
  For VRTSvcsdb package:

```
# patchrm 141287-04
```

For VRTSvcsor or VRTScsocw packages:

```
# patchrm 141288-04
```

For VRTSvcssy package:

```
# patchrm 141289-04
```

Note: For Solaris SPARC 8, 9, 10, if you must remove the 5.0 MP3 RP2 Authentication Service patch (123722-02), you must uninstall the entire VCS product stack, then reinstall VCS.

---

18 Verify that the patches have been removed. On each node, type:

```
# showrev -p | grep VRTS
```

19 Implement the previous type level changes from `/etc/VRTSvcs/conf/types.cf.save.50MP3RP2` file to `/etc/VRTSvcs/conf/config/types.cf` file.

20 Verify that the configuration is valid by running following command:

```
# hacf -verify /etc/VRTSvcs/conf/config
```

21 If the LLT, GAB, or VXFEN modules cannot be stopped or unloaded following the patch removal, reboot all nodes in the cluster.

22 If you do not perform step 21, start the following VCS components manually. On each node, type:

```
# /sbin/lltconfig -c
# /sbin/gabconfig -cx
# /sbin/vxfenconfig -c
# /opt/VRTSvcs/bin/hastart
```

Note: You do not have to start vxfen unless you use the fencing option.

---

23 After VCS has started, perform the following steps:

- Verify all resources have been probed. On any node, type:

```
# hastatus -summary
```

- Unfreeze all service groups. On any node, type:

  ```
  # haconf -makerw
  # hagrp -unfreeze service_group -persistent
  ```

  where *service_group* is the name of the service group. You need to run this command for each service group that is frozen at step 5:

  ```
  # haconf -dump -makero
  ```

24 Bring the ClusterService service group online, if necessary. On any node type:

```
# hagrp -online ClusterService -sys system
```

where *system* is the node name.