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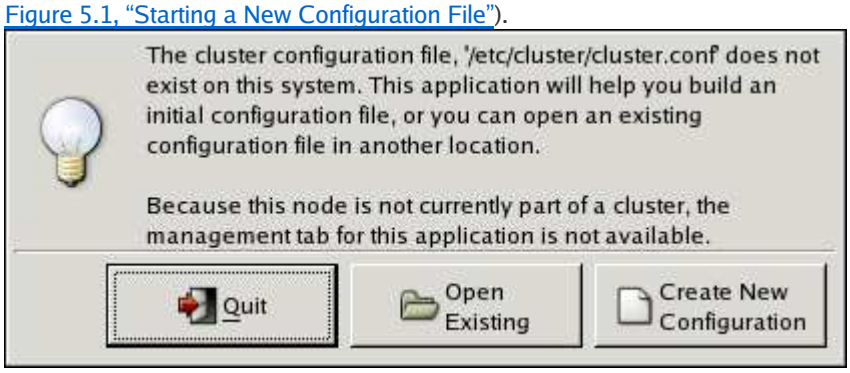
5.2. Starting the Cluster Configuration Tool

You can start the **Cluster Configuration Tool** by logging in to a cluster node as root with the ssh -Y command and issuing the system-config-cluster command. For example, to start the **Cluster Configuration Tool** on cluster node nano-01, do the following:

1. Log in to a cluster node and run system-config-cluster. For example:

```
$ ssh -Y root@nano-01
  .
  .
  .
# system-config-cluster
```

2. If this is the first time you have started the **Cluster Configuration Tool**, the program prompts you to either open an existing configuration or create a new one. Click **Create New Configuration** to start a new configuration file (refer to Figure 5.1, "Starting a New Configuration File").



Starting a New Configuration File.

Figure 5.1. Starting a New Configuration File

> **Note**
>
> The **Cluster Management** tab for the Red Hat Cluster Suite management GUI is available after you save the configuration file with the **Cluster Configuration Tool**, exit, and restart the Red Hat Cluster Suite management GUI (system-config-cluster). (The **Cluster Management** tab displays the status of the cluster service manager, cluster nodes, and resources, and shows statistics concerning cluster service operation. To manage the cluster system further, choose the **Cluster Configuration** tab.)

3. Clicking **Create New Configuration** causes the **New Configuration** dialog box to be displayed (refer to Figure 5.2, "Creating A New Configuration"). The **New Configuration** dialog box provides a text box for cluster name and the following checkboxes: **Custom Configure Multicast** and **Use a Quorum Disk**. In most circumstances you only need to configure the cluster name.

Tip

Choose the cluster name carefully. The only way to change the name of a Red Hat cluster is to create a new cluster configuration with the new name.

Custom Configure Multicast

Red Hat Cluster software chooses a multicast address for cluster management communication among cluster nodes. If you need to use a specific multicast address, click the **Custom Configure Multicast** checkbox and enter a multicast address in the **Address** text boxes.

If you do not specify a multicast address, cman (the cluster manager in Red Hat Cluster software) creates one based on the cluster ID. It generates the lower 16 bits of the address and appends them to the upper portion of the address according to whether the IP protocol is IPv4 or IPv6:

- For IPv4 — The address formed is 239.192. plus the lower 16 bits generated by cman.
- For IPv6 — The address formed is FF15:: plus the lower 16 bits generated by cman.

If you do specify a multicast address, you should use the 239.192.x.x series (or FF15:: for IPv6) that cman uses. Otherwise, using a multicast address outside that range may cause unpredictable results. For example, using 224.0.0.x (which is "All hosts on the network") may not be routed correctly, or even routed at all by some hardware.

Note

If you specify a multicast address, make sure that you check the configuration of routers that cluster packets pass through. Some routers may take a long time to learn addresses, seriously impacting cluster performance.

Note

The cluster ID is a unique identifier that cman generates for each cluster. To view the cluster ID, run the cman_tool status command on a cluster node.

Use a Quorum Disk

If you need to use a quorum disk, click the **Use a Quorum disk** checkbox and enter quorum disk parameters. The following quorum-disk parameters are available in the dialog box if you enable **Use a Quorum disk**: **Interval**, **TKO**, **Votes**, **Minimum Score**, **Device**, **Label**, and **Quorum Disk Heuristic**. Table 5.1, “Quorum-Disk Parameters” describes the parameters.

Important

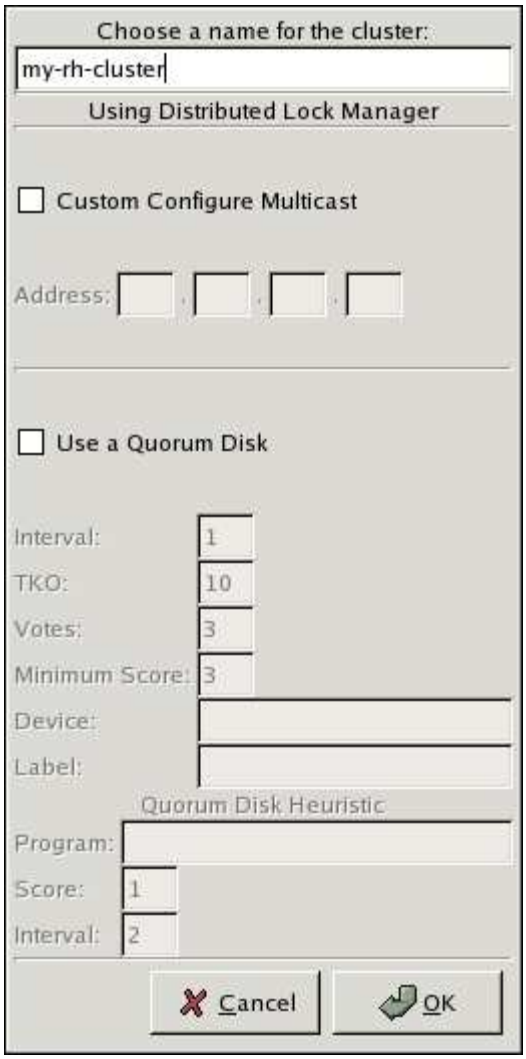
Quorum-disk parameters and heuristics depend on the site environment and special requirements needed. To understand the use of quorum-disk parameters and heuristics, refer to the qdisk(5) man page. If you require assistance understanding and using quorum disk, contact an authorized Red Hat support representative.

Tip

It is probable that configuring a quorum disk requires changing quorum-disk parameters after the initial configuration. The **Cluster Configuration Tool** (system-config-cluster) provides only the display of quorum-disk parameters after initial configuration. If you need to configure quorum disk, consider using **Conga** instead; **Conga** allows modification of quorum disk parameters.

Overall:

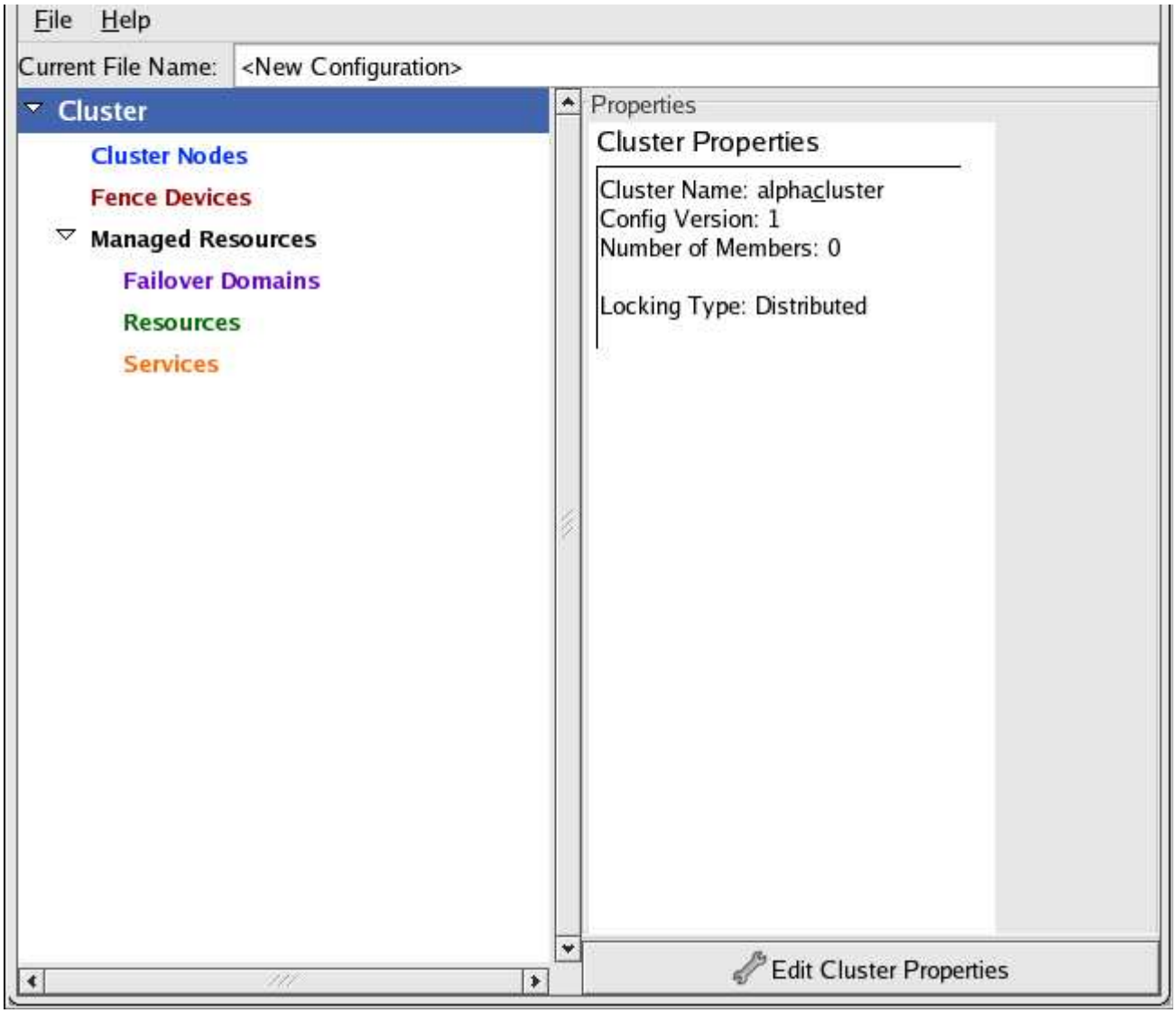
While system-config-cluster provides several convenient tools for configuring and managing a Red Hat Cluster, the newer, more comprehensive tool, **Conga**, provides more convenience and flexibility than system-config-cluster. You may want to consider using **Conga** instead (refer to Chapter 3, *Configuring Red Hat Cluster With **Conga*** and Chapter 4, *Managing Red Hat Cluster With **Conga***).



New Configuration

Figure 5.2. Creating A New Configuration

4. When you have completed entering the cluster name and other parameters in the **New Configuration** dialog box, click **OK**. Clicking **OK** starts the **Cluster Configuration Tool**, displaying a graphical representation of the configuration (Figure 5.3, "The Cluster Configuration Tool").



The **Cluster Configuration Tool**.

Figure 5.3. The Cluster Configuration Tool

Parameter	Description
Use a Quorum Disk	Enables quorum disk. Enables quorum-disk parameters in the **New Configuration** dialog box.
Interval	The frequency of read/write cycles, in seconds.
TKO	The number of cycles a node must miss in order to be declared dead.
Votes	The number of votes the quorum daemon advertises to CMAN when it has a high enough score.
Minimum Score	The minimum score for a node to be considered "alive". If omitted or set to 0, the default function, floor((*n*+1)/2), is used, where *n* is the sum of the heuristics scores. The **Minimum Score** value must never exceed the sum of the heuristic scores; otherwise, the quorum disk cannot be available.
Device	The storage device the quorum daemon uses. The device must be the same on all nodes.
Label	Specifies the quorum disk label created by the mkqdisk utility. If this field contains an entry, the label overrides the **Device** field. If this field is used, the quorum daemon reads /proc/partitions and checks for qdisk signatures on every block device found, comparing the label against the specified label. This is

Parameter	Description
	useful in configurations where the quorum device name differs among nodes.
Quorum Disk Heuristics	**Program** — The program used to determine if this heuristic is alive. This can be anything that can be executed by /bin/sh -c. A return value of 0 indicates success; anything else indicates failure. This field is required. **Score** — The weight of this heuristic. Be careful when determining scores for heuristics. The default score for each heuristic is 1. **Interval** — The frequency (in seconds) at which the heuristic is polled. The default interval for every heuristic is 2 seconds.

Table 5.1. Quorum-Disk Parameters

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