Pacemaker Command Line Tools

Tool Summary

[attrd_updater (attrd_updater.8.html)](attrd_updater.8.html)

attrd_updater − Tool for updating cluster node attributes

[cibadmin (cibadmin.8.html)](cibadmin.8.html)

cibadmin − Provides direct access to the cluster configuration.

Allows the configuration, or sections of it, to be queried, modified, replaced and deleted.

Where necessary, XML data will be obtained using the −X, −x, or −p options

[crm_attribute (crm_attribute.8.html)](crm_attribute.8.html)

crm_attribute − Manage node's attributes and cluster options.

Allows node attributes and cluster options to be queried, modified and deleted.

[crm_diff (crm_diff.8.html)](crm_diff.8.html)

crm_diff − A utility for comparing Pacemaker configurations (XML format)

The tool produces a custom (diff−like) output which it can also apply like a patch

[crm_error (crm_error.8.html)](crm_error.8.html)

crm_error − Tool for displaying the textual name or description of a reported error code

[crm_failcount (crm_failcount.8.html)](crm_failcount.8.html)

crm_failcount − A convenience wrapper for crm_attribute

Set, update or remove the failcount for the specified resource on the named node

[crm_master (crm_master.8.html)](crm_master.8.html)

crm_master − A convenience wrapper for crm_attribute

Set, update or delete a resource's promotion score

This program should normally only be invoked from inside an OCF resource agent

[crm_mon (crm_mon.8.html)](crm_mon.8.html)

crm_mon − Provides a summary of cluster's current state.

Outputs varying levels of detail in a number of different formats.

[crm_node (crm_node.8.html)](crm_node.8.html)

crm_node − Tool for displaying low−level node information

[crm_report (crm_report.8.html)](crm_report.8.html)

crm_report − Create a tarball containing everything needed when reporting cluster problems

[crm_resource (crm_resource.8.html)](crm_resource.8.html)

crm_resource − Perform tasks related to cluster resources. Allows resources to be queried (definition and location), modified, and m
the cluster.

[crm_shadow (crm_shadow.8.html)](crm_shadow.8.html)

crm_shadow − Perform configuration changes in a sandbox before updating the live cluster.

Sets up an environment in which configuration tools (cibadmin, crm_resource, etc) work offline instead of against a live cluster, allow
to be previewed and tested for side−effects.

crm_simulate – Tool for simulating the cluster's response to events

crm_standby – convenience wrapper for crm_attribute

Check, enable or disable standby mode for a cluster node. Nodes in standby mode may not host cluster resources.

Commands:

--help   Display this text and exit

--version

Display version information and exit

-G, **--query**

Display the current value of standby mode (on/off)

-v, **--update=**<value>

Update the value of standby mode (on/off)

-D, **--delete**

Let standby mode use default value

crm_ticket – Perform tasks related to cluster tickets. Allows ticket attributes to be queried, modified and deleted.

crm_verify – Check a (complete) confiuration for syntax and common conceptual errors.

Checks the well-formedness of an XML configuration, its conformance to the configured DTD/schema and for the presence of comm misconfigurations.

It reports two classes of problems, errors and warnings. Errors must be fixed before the cluster will work properly. However, it is left administrator to decide if the warnings should also be fixed.

crmadmin – Development tool for performing some crmd-specific commands.

Likely to be replaced by crm_node in the future

Helper that presents a RHCS-style interface for Linux-HA stonith plugins

Should never need to use invoked by the user directly

Helper that presents a RHCS-style interface to stonith-ng for CMAN based clusters

Should never need to use invoked by the user directly

iso8601 – Display and parse ISO8601 dates and times

pacemaker_remoted – Pacemaker Remote daemon for extending pacemaker functionality to remote nodes.

pacemakerd – Start/Stop Pacemaker

stonith_admin – Provides access to the stonith-ng API.

Allows the administrator to add/remove/list devices, check device and host status and fence hosts

The Right Tool for the Job

Pacemaker ships with a comprehensive set of tools that assist you in managing your cluster from the command line. Here we introduce the tools needed for managing the cluster configuration in the CIB and the cluster resources.

The following list presents several tasks related to cluster management and briefly introduces the tools to use to accomplish these tasks:

Monitoring the Cluster's Status

The **crm_mon** command allows you to monitor your cluster's status and configuration. Its output includes the number of nodes, uname, uuid, status, the resources configured in your cluster, and the current status of each. The output of **crm_mon** can be displayed at the console or printed into an HTML file. When provided with a cluster configuration file without the status section, **crm_mon** creates an overview of nodes and resources as specified in the file. See crm_mon(8) (crm_mon.8.html) for a detailed introduction to this tool's usage and command syntax.

Managing the CIB

The **cibadmin** command is the low-level administrative command for manipulating the Pacemaker CIB. It can be used to dump all or part of the CIB, update all or part of it, modify all or part of it, delete the entire CIB, or perform miscellaneous CIB administrative operations. See cibadmin(8) (cibadmin.8.html) for a detailed introduction to this tool's usage and command syntax.

Managing Configuration Changes

The **crm_diff** command assists you in creating and applying XML patches. This can be useful for visualizing the changes between two versions of the cluster configuration or saving changes so they can be applied at a later time using cibadmin(8) (cibadmin.8.html). See crm_diff(8) (crm_diff.8.html) for a detailed introduction to this tool's usage and command syntax.

Manipulating CIB Attributes

The **crm_attribute** command lets you query and manipulate node attributes and cluster configuration options that are used in the CIB. See crm_attribute(8) (crm_attribute.8.html) for a detailed introduction to this tool's usage and command syntax.

Validating the Cluster Configuration

The **crm_verify** command checks the configuration database (CIB) for consistency and other problems. It can check a file containing the configuration or connect to a running cluster. It reports two classes of problems. Errors must be fixed before Pacemaker can work properly while warning resolution is up to the administrator. **crm_verify** assists in creating new or modified configurations. You can take a local copy of a CIB in the running cluster, edit it, validate it using **crm_verify**, then put the new configuration into effect using **cibadmin**. See crm_verify(8) (crm_verify.8.html) for a detailed introduction to this tool's usage and command syntax.

Managing Resource Configurations

The **crm_resource** command performs various resource-related actions on the cluster. It lets you modify the definition of configured resources, start and stop resources, or delete and migrate resources between nodes. See crm_resource(8) (crm_resource.8.html) for a detailed introduction to this tool's usage and command syntax.

Managing Resource Fail Counts

The **crm_failcount** command queries the number of failures per resource on a given node. This tool can also be used to reset the failcount, allowing the resource to again run on nodes where it had failed too often. See crm_failcount(8) (crm_failcount.8.html) for a detailed introduction to this tool's usage and command syntax.

Generate and Retrieve Node UUIDs

UUIDs are used to identify cluster nodes to ensure that they can always be uniquely identified. The command **crm_uuid** displays the UUID of the node on which it is run. In very rare circumstances, it may be necessary to set a node's UUID to a known value. This can also be achieved with **crm_uuid**, but you should use this command with extreme caution. For more information, refer to crm_uuid(8) (crm_uuid.8.html).

Managing a Node's Standby Status

The **crm_standby** command can manipulate a node's standby attribute. Any node in standby mode is no longer eligible to host resources and any resources that are there must be moved. Standby mode can be useful for performing maintenance tasks, such as kernel updates. Remove the standby attribute from the node as it should become a fully active member of the cluster again. See crm_standby(8) (crm_standby.8.html) for a detailed introduction to this tool's usage and command syntax.

Find out more about Pacemaker on our wiki (http://clusterlabs.org/wiki)

Send site feedback to the project mailing list (mailto:users@clusterlabs.org) or maintainer: Andrew Beekhof (mailto:andrew@beekhof.net)