Quick Reference

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This edition applies to IBM® PowerHA® SystemMirror® 7.2 Standard Edition for AIX® and to all subsequent releases and modifications until otherwise indicated in new editions.

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clmgr command

Use the following information to quickly find the most common syntax and examples for the PowerHA SystemMirror **clmgr** command.

For more detailed information about the **clmgr** command, see the man page documentation in the clmgr command topic.

Basic usage

Command usage	Command syntax
Basic command format	`clmgr <ACTION> <CLASS> [<OBJECT>] [COMMAND-SPECIFIC INPUTS]`

Flexible output from data retrieval commands	**Displays <ATTR>="<VALUE>" pairs (default)**
	`clmgr query <CLASS> <OBJECT>`
	Displays colon–delimited output
	`clmgr –c query <CLASS> <OBJECT>`
	Displays custom-delimited output
	`clmgr –d<C> query <CLASS> <OBJECT>`
	Displays quasi-XML format
	`clmgr –x query <CLASS> <OBJECT>`

Intention Recognition: Aliases	**clmgr *add* cluster** The *add* action includes the following aliases: *create*, *make*, and *mk*. **clmgr *query* node** The *query* action includes the following aliases: *show*, *list*, *ls*, and *get*. **Note:** You can display available aliases by running the `clmgr <ACTION> <CLASS> -h` command.

Intention Recognition: Case sensitivity	The case sensitivity is ignored for all actions, classes, and input labels. For example, the following command syntax is valid:
	`clmgr query cluster == clmgr QueRY cLUsteR`
	`clmgr MoVe RESource_GroUp <RG> nODe=<NODE>`
	Note: The case sensitivity does not apply to labels used within the PowerHA SystemMirror product. For example, you can create a node that is labeled *MyNode*.

Intention Recognition: Abbreviations	You can enter enough letters to be unambiguous when you are typing syntax. The following examples have the exact syntax first, and then followed by the abbreviated syntax. Both of the following commands provide the same results.
	`clmgr query cluster == clmgr q cl`
	`clmgr add tape SHARED_TAPE_RESOURCE=/dev/rmt0 == clmgr add tape SH=/dev/rmt0`

Command usage	Command syntax
	Note: Abbreviations are intended for ease-of-use while you are typing from the command line. Do not use abbreviations in scripts. Abbreviations might change over time, and are not documented.
Log file	`/var/hacmp/log/clutils.log`

Defining basic topology

Command usage	Command syntax
Define a cluster with no sites	`clmgr add cluster nodes=<NODE1>,<NODE2>` `clmgr add repository <DISK_IDENTIFIER>`

Define a stretched cluster
Note: Sites are defined, but only one repository disk is required for a stretched cluster because the repository disk is shared by all sites.
	`clmgr add cluster type=stretched nodes=<NODE1>,<NODE2>,<NODE3>,<NODE4>`
	`clmgr add site <SITENAME> nodes=<NODE1>,<NODE2>`
	`clmgr add site <SITENAME> nodes=<NODE3>,<NODE4>`
	`clmgr add repository <DISK_IDENTIFIER>`

Define a linked cluster
Note: Sites are defined and each site has its own repository disk.
	`clmgr add cluster type=linked nodes=<NODE1>, <NODE2>, <NODE3>,<NODE4>`
	`clmgr add site <SITE1> nodes=<NODE1>,<NODE2>`
	`clmgr add site <SITE2> nodes=<NODE3>,<NODE4>`
	`clmgr add repository <DISK_IDENTIFIER1> site=<SITE1>`
	`clmgr add repository <DISK_IDENTIFIER2> site=<SITE2>`

Create the newly defined objects on all the defined nodes	`clmgr sync cluster` The alias for a `cluster` is `cl`. **Note:** You must verify and synchronize the cluster after any configuration changes to replicate the change to other nodes in the cluster.

Defining resource groups

Command usage	Command syntax

Define a resource group	`clmgr add resource_group <RG_NAME> nodes=<NODE1>,<NODE2> \`
	`applications=<APP1>,<APP2> volume_group=<VG1>,<VG2> \`
	`service_label=<SERVICE_IP_LABEL> ...`
	The alias for a `resource_group` is `rg`.
	Note: A resource group is a set of cluster resources that you configure and manage as a single unit.

Modify a resource group	`clmgr modify resource_group <RG_NAME> FILESYSTEM=<PATH> \`
	`service_label=<SERVICE_IP_LABEL> ...`
	The alias for a `resource_group` is `rg`.

Defining application resources

Command usage	Command syntax
Define an application controller **Note:** You can use this command to automatically start and stop an application.	``` clmgr add application_controller STARTSCRIPT=<path_to_start_script> \ STOPSCRIPT=<path_to_stop_script> ``` The aliases for an `application_controller` are `ac`, `app`, and `appctl`. **Note:** You must specify the scripts for an application. The scripts must exist on every node the application might run on.
Define an application monitor: Process-based	``` clmgr add application_monitor <MONITOR> TYPE=Process MODE=longrunning \ processes=<PROCESS_NAMES> OWNER=<USER_ID> \ applications=<APPLICATION_CONTROLLER> ``` The aliases for an `application_monitor` are `am`, `mon`, `appmon`. You can use the **`ps -e`** command to determine the correct process names to use an application. Do not use the **`ps -ef`** command. For example, you can use the **`ps -e | awk '{print $4}' | sort –u`** command. **Note:** This type of monitoring detects the termination of one or more application processes.
Define an application monitor: Custom	``` clmgr add application_monitor <MONITOR> TYPE=Custom MODE=longrunning \ monitormethod=<PATH_TO_SCRIPT> OWNER=<USER_ID> \ applications=<APPLICATION_CONTROLLER> ``` The aliases for an `application_monitor` are `am`, `mon`, `appmon`. **Note:** This type of monitoring checks the health of an application by running the specified monitor method file at configurable intervals and checking the monitors exit code. The monitor method file must exist on every node the application might run on.

Creating LVM resources

Command usage	Command syntax
Create a volume group	``` clmgr add volume_group [<VG_NAME>] nodes=<NODE1>,[NODE2>] \ disks=<DISK1>,<DISK2> type=scalable ``` The alias for a `volume_group` is `vg`.
Create a logical volume	``` clmgr add logical_volume [<LV_NAME>] volume_group=<VG1> \ logical_partitions=## type=jfs2 ... ``` The alias for a `logical_volume` is `lv`.

Command usage	Command syntax
Create a file system: Create logical volume	`clmgr add file_system <FS_NAME> volume_group=<VG1> \ type=enhanced units=### size_per_unit=megabytes ...` The alias for a `file_system` is `fs`. **Note:** You must specify the size of the file system to create this type of a file system.
Create a file system: Use logical volume	`clmgr add file_system <FS_NAME> volume_group=<VG1> \ type=enhanced units=### size_per_unit=megabytes ...` The alias for a `file_system` is `fs`. **Note:** You must specify the size of the specific logical volume to create this style of a file system.
Create a mirror pool: All disks	`clmgr add mirror_pool <POOL_NAME> volume_group=<VG_NAME>` The aliases for a `mirror_pool` are `mp` and `pool`.
Create a mirror pool: Specified disks	`clmgr add mirror_pool <POOL_NAME> volume_group=<VG_NAME> \ physical_volumes=<DISK1>,<DISK2>,<DISK3>` The aliases for a `mirror_pool` are `mp` and `pool`.

Managing volume groups

Command usage	Command syntax
Volume Group: Add a physical volume	`clmgr modify volume_group <VG_NAME> add=<DISK>` The alias for a `volume_group` is `vg`.
Volume Group: Add a mirror pool	`clmgr modify volume_group <VG_NAME> add=<DISK> mirror_pool=<POOL_NAME>` The alias for a `volume_group` is `vg`.
Volume Group: Remove a physical volume	`clmgr modify volume_group <VG_NAME> remove=<DISK>` The alias for a `volume_group` is `vg`.

Managing resource groups

Command usage	Command syntax
Move a resource group: New node	`clmgr move resource_group <RG_NAME> node=<NODE2>` The alias for a `resource_group` is `rg`.

Command usage	Command syntax
	Note: All resources that are managed by the resource group are brought offline on the current node, and brought online on the specified new node.
Move a resource group: New site	`clmgr move resource_group <RG_NAME> site=<SITE2>` The alias for a `resource_group` is `rg`. **Note:** All resources that are managed by the resource group are brought offline on the current node, and brought online on the specified new node.

Start a resource group	`clmgr start resource_group <RG_NAME> node=<NODE2> [PRIMARY=true] [SECONDARY=true]`
	The alias for a `resource_group` is `rg`.
	Note: All resources that are managed by the resource group are brought offline on the current node, and brought online on a node within the specified site. If you do not specify the node input, the resource group is brought online on a default node for the current policy.
	To bring the resource group simultaneously in ONLINE and ONLINE SECONDARY state in a multi-site cluster environment, you must specify following additional attributes:
	`PRIMARY=TRUE and SECONDARY=true`
	To bring the resource group in ONLINE SECONDARY state on a node, run the following command:
	`clmgr start resource_group <RG_NAME> [node=<NODE2>] [SECONDARY=true]`

Stop a resource group	`clmgr stop resource_group <RG_NAME> [node=<NODE2>] [PRIMARY=true] [SECONDARY=true]`
	Note: Resources that are managed by the resource group are brought offline on the current node.
	To bring the resource group simultaneously on both sites from ONLINE and ONLINE SECONDARY state to OFFLINE state, you must specify following additional attributes:
	`PRIMARY=TRUE and SECONDARY=true`
	To bring down the resource group from ONLINE SECONDARY to OFFLINE state on a node, run the following command:
	`clmgr stop resource_group <RG_NAME> [node=<NODE2>] [SECONDARY=true]`

Suspend application monitoring	`clmgr manage application controller suspend <APP>`

Command usage	Command syntax
	Note: This command suspends application monitoring for the specified application. You can specify `ALL` instead of an `application controller` to suspend all application monitoring.
Resume application monitoring	`clmgr manage application_controller resume <APP>` **Note:** This command resumes application monitoring for the specified application. You can specify `ALL` instead of an `application controller` to suspend all application monitoring.
Move service IP	`clmgr move service_ip <SERVICE_LABEL> interface=<NEW_INTERFACE>` **Note:** The <NEW_INTERFACE> variable refers to a logical interface. For example, en3.

Cluster services

Command usage	Command syntax
Start cluster services: Entire cluster	`clmgr start cluster` **Note:** All resources that are managed by the cluster are brought online unless the **Manage Resouce Group** option in SMIT is set to **Manually**.
Start cluster services: Site	`clmgr start site <SITE_NAME>` **Note:** All resources that are managed by the nodes within the site are brought online, unless the current policy setting forbids it or in the SMIT interface the **System Management (C-SPOC)** > **PowerHA SystemMirror Services** > **Start Cluster Services** > **Manage Resouce Group** field is set to **Manually**.
Start cluster services: Node	`clmgr start node <NODE_NAME>` **Note:** All resources that are managed by the node are brought online, unless current policy setting forbids it or in the SMIT interface the **System Management (C-SPOC)** > **PowerHA SystemMirror Services** > **Start Cluster Services** > **Manage Resouce Group** field is set to **Manually**.
Stop cluster services: Entire cluster	`clmgr stop cluster` **Note:** All resources that are managed by the cluster are brought offline. If you want to suspend cluster services without bringing applications and other resources offline, you must set the `manage` option to `unmanage`.
Stop cluster services: Site	`clmgr stop site <SITE_NAME>` **Note:** All resources that are managed by the nodes within the site are brought offline, unless the `manage` option is set to `unmanage` or `move`.

Command usage	Command syntax
Stop cluster services: Node	`clmgr stop node <NODE_NAME>` **Note:** All resources that are managed by the node are brought offline, unless the `manage` option is set to `unmanage` or `move`.