

IBM PowerHA SystemMirror for AIX

Enterprise Edition

Version 7.2.4

Release Notes



Note

Before using this information and the product it supports, read the information in [“Notices” on page 15.](#)

First edition (December 2019)

This edition applies to PowerHA SystemMirror Version 7.2.4 for AIX and to all subsequent release and modifications until otherwise indicated in new editions.

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About this document

The Release Notes topics include late technical information that is not included in other topics, and they highlights new functions for the PowerHA® SystemMirror® Version 7.2.4 for AIX® licensed program.

Highlighting

The following highlighting conventions are used in this document:

Bold	Identifies commands, subroutines, keywords, files, structures, directories, and other items whose names are predefined by the system. Bold highlighting also identifies graphical objects, such as buttons, labels, and icons that the you select.
<i>Italics</i>	Identifies parameters for actual names or values that you supply.
Monospace	Identifies examples of specific data values, examples of text similar to what you might see displayed, examples of portions of program code similar to what you might write as a programmer, messages from the system, or text that you must type.

Case sensitivity in AIX

Everything in the AIX operating system is case sensitive, which means that it distinguishes between uppercase and lowercase letters. For example, you can use the **ls** command to list files. If you type LS, the system responds that the command is not found. Likewise, **FILEA**, **Filea**, and **filea** are three distinct file names, even if they reside in the same directory. To avoid causing undesirable actions to be performed, always ensure that you use the correct case.

ISO 9000

ISO 9000 registered quality systems were used in the development and manufacturing of this product.

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New functions and features

Simplify SVC PPRC configuration tasks by using automatic discovery

Configuring SAN Volume Controller (SVC) Peer-to-Peer Remote Copy (PPRC) mirrors was a manual process in earlier releases. In PowerHA SystemMirror Version 7.2.4, or later, you can automatically configure SVC PPRC mirrors by using a discovery facility.

Non-root SVC mirror management

You can now specify alternative credentials instead of the root user credentials, which PowerHA SystemMirror uses to access the SVC storage management functions.

Software requirements

Before you install PowerHA SystemMirror Version 7.2.4, you must install all available service packs for AIX and PowerHA SystemMirror from the [IBM® Fix Central](#) website.

PowerHA SystemMirror Version 7.2.4 is supported on the following versions of the AIX operating system:

- IBM AIX 7.1 with Technology Level 4 with Service Pack 8, or later
- IBM AIX 7.1 with Technology Level 5 with Service Pack 4, or later
- IBM AIX 7.2 with Technology Level 1 with Service Pack 6, or later
- IBM AIX 7.2 with Technology Level 2 with Service Pack 4, or later
- IBM AIX 7.2 with Technology Level 3 with Service Pack 3, or later
- IBM AIX 7.2 with Technology Level 4 with Service Pack 1, or later

Hardware requirements

PowerHA SystemMirror graphical user interface (GUI) requires IBM POWER7® or later technology-based servers.

Installation and migration

From any earlier versions of PowerHA SystemMirror, you can upgrade to the subsequent three versions of PowerHA SystemMirror only. If you want to upgrade to an even higher version of PowerHA SystemMirror, you must first upgrade to an intermediate PowerHA SystemMirror version. You can then upgrade to the PowerHA SystemMirror version that you want. For example, if you are running PowerHA SystemMirror Version 7.1.3 or PowerHA SystemMirror Version 7.2.0 and if you want to upgrade to PowerHA SystemMirror Version 7.2.4, you must first upgrade to PowerHA SystemMirror Version 7.2.1, PowerHA SystemMirror Version 7.2.2, or PowerHA SystemMirror Version 7.2.3, and then upgrade to PowerHA SystemMirror Version 7.2.4.

For more information, see [Supported upgrade PowerHA SystemMirror versions](#).

PowerHA SystemMirror GUI

You do not need to install the PowerHA SystemMirror GUI server in a PowerHA SystemMirror cluster, but the PowerHA SystemMirror GUI agent must be installed in a cluster. When you migrate a PowerHA SystemMirror GUI agent, an attempt is made to restart the agent service when the migration completes. When you migrate a PowerHA SystemMirror GUI server, an attempt is made to maintain the original state of the agent service. If the PowerHA SystemMirror GUI server is active when the migration begins, an attempt is made to restart the PowerHA SystemMirror GUI server when the migration completes.

For more information about migration, see the [Upgrading a PowerHA SystemMirror cluster](#) topic.

Additional information

PowerHA SystemMirror GUI

- If you cannot add a cluster to the PowerHA SystemMirror GUI, or create a new cluster from the PowerHA SystemMirror GUI, consider the following points:
 - Verify that the nodes in the cluster have a host name that can be routed to the PowerHA SystemMirror GUI server. You cannot use a routed service IP addresses to manage a cluster.
 - Verify that SSH connection from the PowerHA SystemMirror GUI server to the remote system that you are trying to connect is working. For example:

```
# ssh 172.19.67.49 /bin/hostname
The authenticity of host '172.19.67.49 (172.19.67.49)' can't be established.
ECDSA key fingerprint is 41:19:ea:f6:4f:46:91:29:f5:a0:fd:89:91:f7:28:97.
Are you sure you want to continue connecting (yes/no)?
```

In the current version of PowerHA SystemMirror GUI, you must also respond to the prompt to establish the SSH connection. You must respond by entering yes to add the host to the `~/.ssh/known_hosts` file of the PowerHA SystemMirror GUI server. After adding the host name to the hosts files the prompt is not displayed again.

- Only a **root** user can create or add a cluster. After the cluster is added in the PowerHA SystemMirror GUI, a non-root user can also manage clusters through the PowerHA SystemMirror GUI. If you do not have root credentials, a **root** user must configure the **sudo** command such that it can be run on one of the nodes in the cluster. For more information, see [Logging in as a non-root user](#). If you have root credentials, Secure Shell (SSH) service must be configured on the cluster to allow root access. The value of the **PermitRootLogin** parameter must be set to yes in the `/etc/ssh/sshd_config` file. You must restart the SSH service after you modify the `sshd_config` file.
 - SSH service can be used with a key or with a password. For a key, the key must not have a passphrase. The **configPasswordAuthentication** parameter must be set to yes in the `/etc/ssh/sshd_config` file. You must restart the SSH service after you modify the `sshd_config` file.
- If the status of a cluster is incorrect in the PowerHA SystemMirror GUI, consider the following points:
 - The PowerHA SystemMirror GUI server does not poll the cluster nodes for status. The PowerHA SystemMirror GUI listens for status change notifications from each node as indicated in the following actions:
 - Core PowerHA SystemMirror GUI events are sent to the PowerHA SystemMirror GUI server immediately after they occur.
 - When the **clmgr** command is used to modify the configuration of a cluster, a notification is sent to the PowerHA SystemMirror GUI server.
 - Verify that the network and firewall settings are allowing traffic between the PowerHA SystemMirror GUI server and PowerHA SystemMirror GUI agents by checking the following items:
 - The default port for the PowerHA SystemMirror GUI server is 8080. You can specify a different value for the port in the `/usr/es/sbin/cluster/ui/server/configuration-server.json` file.
 - The default port for the PowerHA SystemMirror GUI agent is 8081. You can specify a different value for the port in the `/usr/es/sbin/cluster/ui/agent/configuration-agent.json` file.

For more information about changing the values for the ports, see the [Changing ports](#).

- Synchronize the cluster by running the following command:

```
clmgr synchronize cluster
```

After you synchronize the cluster, if the **sync PASSED** event does not appear in the event viewer for that cluster or if the cluster status in the PowerHA SystemMirror GUI is not correct, the problem might require IBM Support assistance.

See [Troubleshooting the PowerHA SystemMirror GUI](#) for more assistance.

- In the PowerHA SystemMirror GUI, you must avoid changing the host name of the PowerHA SystemMirror GUI server. If you must modify the host name of the PowerHA SystemMirror GUI server, clusters that are managed by the PowerHA SystemMirror GUI might not be able to communicate status updates to the PowerHA SystemMirror GUI server. You can avoid this issue in one of the following ways:
 - Remove the cluster from the PowerHA SystemMirror GUI server before you modify the host name, and add the cluster after you modify the host name.
 - Modify the host name of the PowerHA SystemMirror GUI server, and manually update the `/usr/es/sbin/cluster/ui/agent/configuration-agent.json` file on each cluster node. Replace the old server IP address with the new IP address in the **serverURI** property. Restart the PowerHA SystemMirror GUI agent after you modify the file.
- PowerHA SystemMirror GUI cannot identify temporary host name changes that are made by using the **hostname** command. You can modify the host name permanently in the following ways:
 - Use the `/usr/es/sbin/cluster/ui/agent/bin/cl_set_hostname` utility.

```
cl_set_hostname -p [-P] [-a <ADDRESS>] <NEW_HOSTNAME>
```

- Update the `/etc/hosts` file and add the new host name. The previous host name must not be removed.
- Run **smitty hostname** and set the new hostname.
- Run any of the following commands:

```
chdev -l inet0 -a hostname=<NEW_HOSTNAME>
```

```
/usr/sbin/hostid [hostname]
```

```
/usr/lib/lpd/pio/etc/piodmgr -c > /dev/null 2>&1
```

- The option to authenticate by using an SSH key is not available from the open terminal feature. SSH authentication is supported only through a password.
- You do not need to install the PowerHA SystemMirror GUI server in a PowerHA SystemMirror cluster, but the PowerHA SystemMirror GUI agent must be installed in a cluster. If the PowerHA SystemMirror GUI server is installed within a PowerHA SystemMirror cluster, the PowerHA SystemMirror GUI can be used to keep the PowerHA SystemMirror GUI server highly available.
- The PowerHA SystemMirror GUI can manage AIX and Linux clusters concurrently, and with full multi-tenancy support. For more information, see [Cluster zones](#).
- If you install the PowerHA SystemMirror GUI server within a cluster, you must install it on only one of the nodes in the cluster unless you are configuring the PowerHA SystemMirror GUI for high availability. For more information, see [Configuring the GUI to be highly available](#).
- By default, the PowerHA SystemMirror GUI server uses the IP address that is associated with the default host name of the system on which it is running. The PowerHA SystemMirror GUI agents use IP address of the host name to communicate the cluster status to the PowerHA SystemMirror GUI server. If you want to use an alternative IP address for the PowerHA SystemMirror GUI communication, specify the IP address in the **serverAddress** property in the `/usr/es/sbin/cluster/ui/server/configuration-server.json` file. For more information, see [Configuring the PowerHA SystemMirror GUI](#).

Documentation

To view the latest updates to the documentation, see the [What's new in PowerHA SystemMirror Version 7.2.4 for AIX topic](#).

To view the documentation in PDF files, see the [PowerHA SystemMirror for AIX PDFs](#) topic.

Man pages

The man pages for the PowerHA SystemMirror commands are provided in the `cluster.man.en_US.es.data` fileset. To view the man pages, from the command line, enter `man command_name` (where *command_name* is the name of the command). You can also view the man pages in the IBM Knowledge Center, [PowerHA SystemMirror commands](#).

You can use the **clmgr** command to perform most of the PowerHA SystemMirror operations. For more information about the operations that you can perform by using the **clmgr** command, see the [clmgr command: Quick reference](#) topic.

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