Sangfor HCI

Release Notes

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About This Document

This document describes the new features in HCI6.3.0R2 and provide detailed upgrade guide for HCI.

Intended Audience

This document is intended for:

- Network Design Engineer
- Operations Engineer

Note Icons

English Icon	Description
	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
	Indicates a hazardous situation, which if not avoided, could result in minor or moderate injury.
	Indicates a hazardous situation, which if not avoided, could result in settings failing to take effect, equipment damage, or data loss. NOTICE addresses practices not related to personal injury.
	Calls attention to important information, best practices, and tips. NOTE addresses information not related to personal injury or equipment damage.

Change Log

Date	Change Description
Dec. 20, 2021	This is the first release of this document.

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1 Overview

1.1 Major Features

1.1.1 New Features

New features

Isolation of Uncorrectable ECC Memory Errors

Scenarios and values

1. Isolation of Uncorrectable ECC Memory Errors

   There are two types of ECC memory errors: CE (correctable error) and UE (uncorrectable error). When a correctable memory corruption error occurs, the isolation of uncorrectable ECC memory errors can quickly and accurately identify and isolate the correctable error (HCI6.3.0_R1_EN version has implemented this feature), preventing the correctable error from deteriorating into an uncorrectable error which will cause computer crash and affect or interrupt customer's business, and improving the reliability and stability of the platform.

   The current version mainly enhances the recovery of the following two types of uncorrectable errors:

   a. By killing the corresponding program and then isolating the uncorrectable memory errors, the impact of the uncorrectable errors is reduced to affecting only the corresponding program, rather than bringing the node down.

   b. If a program accesses an uncorrectable memory error, it will be killed; Active scanning for uncorrectable errors can find some uncorrectable errors in advance and give alerts. In addition, uncorrectable errors on idle pages are isolated to reduce the impact of programs being killed for accessing uncorrectable memory errors.

   At the same time, when the RAM encounters uncorrectable errors,the platform will immediately generate an alert, and the user can know the ECC memory failure and recommendations through the alert, so as to take

appropriate measures to deal with the failure.

Scenarios:

Exercises in the medical field such as HIS、HIP、LIS、EMR、RIS.

Financial production systems, core enterprise business systems such as ERP and core database scenarios.

Core government business system such as information service system, public business management system, etc.

Target Customers

1. Clients from all industries
2. Technical support engineers

1.1.2 Others

1. If the customer hot upgrades the platform to HCI6.3.0_R2_EN from a earlier version and wants to enable the uncorrectable error isolation of ECC memory, but does not want to restart all nodes of the cluster at a time, then the customer can take turns to restart nodes to enable this feature.

   Steps:

   a. After a successful hot upgrade from a lower version, the new version takes effect and the virtual storage data is synchronized.
   b. Set a single node in the cluster to enter maintenance mode and migrate VMs on it to other nodes.
   c. After all VMs on the node are migrated, restart the node.
   d. Exit maintenance mode.
   e. Wait for virtual storage data synchronization to complete.
   f. Perform the steps from (b) to (e) above on the other nodes in the cluster by turn.

   Note:

   Currently, we have verified that it takes 3 working days for a cluster with 12 nodes and 216 running VMs to complete the upgrade each node and the restart of each node. The time spent in this process is related to the number of running VMs and the data size. This statistic is for reference

only.

1.2 Upgrade Impacts

1. The cold upgrade will interrupt the business. All VMs and NFV devices need to be shut down before the upgrade. After the upgrade, all nodes need to be restarted.
2. During the hot upgrade, VMs and NFV devices do not need to be shut down or restarted, but the virtual network will be interrupted for about 1 minute. After the upgrade, nodes do not need to be restarted.
3. With the cold upgrade, the isolation of uncorrectable ECC memory errors takes effect once the node is restarted.
4. With the hot upgrade, the isolation of uncorrectable ECC memory errors only takes effect after the new version takes effect and the node is restarted.

1.2.1 Impacts on Services

None.

1.2.2 Impacts on O&M

None.

1.2.3 Impacts on Customer Network

None.

1.2.4 Other Impacts

None.

1.3 Upgrade Instructions for Customers

1.3.1 Upgrade Preparations

5.8.3_EN_B

5.8.3_EN

5.8.5_EN_B

5.8.5_EN

5.8.6_EN_B

5.8.6_EN

5.8.7_R1_EN_B

5.8.7_R1_EN

5.8.8_EN_B

5.8.8_EN

5.8.8_R1_EN

6.0.0_EN_B

6.0.0_EN

6.0.0_R3_EN

6.0.0_R4_EN

6.0.0_R5_EN

6.0.1_EN_B

6.0.1_EN

6.0.1_R1_EN

6.1.0_EN

6.1.0_R1_EN

6.2.0_EN_B

6.2.0_EN

6.3.0_EN_B

6.3.0_EN

6.3.0_R1_EN_B

6.3.0_R1_EN

6.3.0_R2_EN_B

6.3.0_R2_EN

a) Support upgrade from versions with any service pack installed but not

support upgrade from custom version.

b) Before upgrading the old version earlier than 6.3.0_R2_EN, you need to use aDeploy3.4.3 or its later version for pre-upgrade check and pre-check package installation.

c) Versions earlier than 5.8.3_EN need to be upgraded to 5.8.3_EN before being upgraded to subsequent versions.

d) Versions from 5.8.5_EN to 6.0.0_R4_EN can only be upgraded to 6.0.0_R5_EN, 6.2.0_EN, 6.3.0_R1_EN or 6.3.0_R2_EN.

e) 6.0.0_R5_EN can only be upgraded to 6.2.0_EN, 6.3.0_R1_EN or 6.3.0_R2_EN.

f) 6.0.1_EN, 6.0.1_R1_EN, 6.1.0_EN, 6.1.0_R1_EN can only be upgraded to 6.2.0_EN, 6.3.0_R1_EN or 6.3.0_R2_EN.

g) 6.2.0_EN and 6.3.0_EN can only be upgraded to 6.3.0_R1_EN or 6.3.0_R2_EN.

h) 6.3.0_R1_EN can be upgraded to 6.3.0_R2_EN.

1.3.2 Notes

1. Versions earlier than 5.8.3_EN can only be upgraded to 5.8.3_EN before being upgraded to subsequent versions.
2. As a cluster scales out, converting configuration files takes longer, so does the upgrade process. For reference, upgrading a 11-node cluster running 1,000 virtual machines may take 30 minutes while upgrading a 2-node cluster running 1,000+ virtual machines (virtual storage: 6.4 TB) may just take 14 minutes.
3. After upgrade, for device which has graphics card inserted but has not enabled IOMMU, it is required to enable IOMMU and restart again.
4. During the upgrade process, creation of storage based snapshots and linked clones and change of storage policies cannot be performed on the VM before new upgrades take effect.

1.4 Implementation Procedures

1. Use aDeploy of the versions mentioned above for pre-upgrade check and pre-

check package installation.

2. Troubleshoot the detected issues.
3. Shut down all the virtual machines and virtual network devices of versions before 5.8.6_EN.
4. Check whether the upgrade package to be installed is the official upgrade package of 6.3.0_R2_EN.
5. Check the upgrade environment.
6. Load the official upgrade package of 6.3.0_R2_EN.
7. After the hot upgrade (wait for the upgrade to complete and then coordinate with customer again to restart all nodes to enable the isolation of uncorrectable ECC memory errors), restart the nodes accordingly.

1.5 Check Service Status After Upgrade

Restart of device is required after upgrade for all versions, except for the versions since 5.8.6_EN. Services will be interrupted due to restart.

1.6 Rollback Instructions

Rollback is not supported.

If any issues occur during or after the upgrade, call Customer Service at +60 12 711 7129(7511) or contact local technical support for help.

2 Upgrade Guide

2.1 Confirmation Before Upgrade

2.1.1 Upgrade Tools

1. Get aDeploy tools from https://community.sangfor.com/plugin.php?id=service:download&action=tool.
2. Get the upgrade package from

https://community.sangfor.com/plugin.php?id=service:download&action=view&fid=47#/12/all.

2.1.2 Environment Information

None.

2.1.3 Customer Resources

None.

2.2 Check Before Upgrade

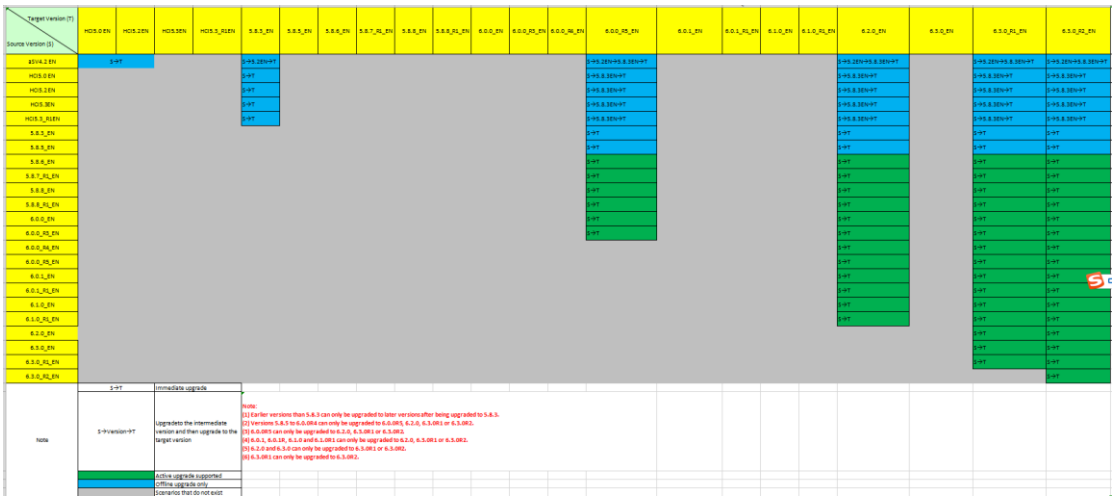
Before the upgrade, use aDeploy for cluster pre-upgrade checking as well as applying precheck package.

2.3 Notes

None.

2.4 Upgrade Procedure

2.4.1 Upgrade Path



HCI Upgrade Path_0923.xlsx

2.4.2 Upgrade Procedure

1. Use aDeploy for pre-upgrade check and pre-check package installation.
2. Troubleshoot the detected issues.
3. Shut down all the virtual machines and virtual network devices of versions before 5.8.6_EN and 5.8.7R1_EN.
4. Ensure that the HCI version to be upgraded is the official upgrade package of 6.3.0_R2_EN.
5. Check the upgrade environment.
6. Load the the official upgrade package of HCI6.3.0_R2_EN.
7. After the hot upgrade (wait for the upgrade to complete and then coordinate with customer again to restart all nodes to enable the isolation of uncorrectable ECC memory errors), cold restart nodes.

2.5 Check After Upgrade

2.5.1 Checking the Platform

Check whether the upgrade task is completed and whether the current version is HCI6.3.0_R2_EN under **System** > **System Maintenance** > **Upgrade**.

2.5.2 Checking Service Status

Check whether VMs in HCI are running properly, and whether backup policies and snapshot policies work normally.

2.6 Troubleshooting Abnormalities

Scenario 1: There are VMs or virtual network devices which have not been shut down.

Solution: Shut down VMs and virtual network devices. Only version lower than 5.8.6 required to shutdown VMs and virtual network devices for cold upgrade.

Scenario 2: Network is unstable due to reboot or unstable cluster.

Solution: Wait for the cluster or network to become stable and then perform upgrade again.

2.7 Rollback Instructions

Rollback is not supported.

If any issues occur during or after the upgrade, call Customer Service at +60 12 711 7129(7511) or contact local technical support for help.

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