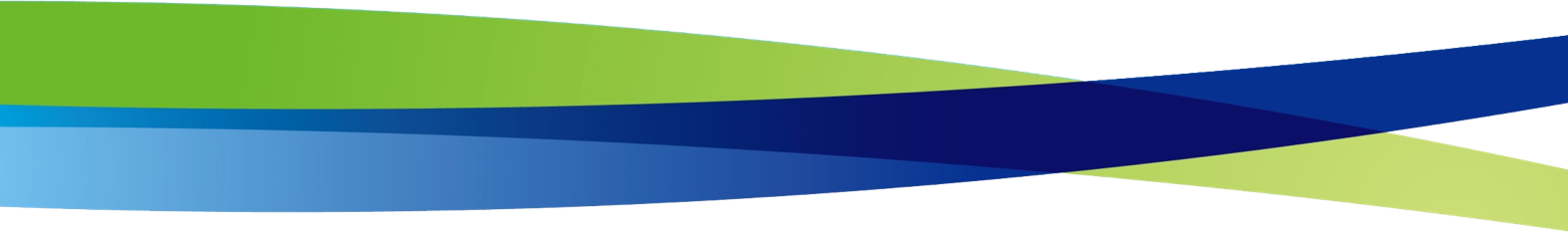


Health Check Report

Sangfor Technologies Inc.

Customer Service Center



# File Information

|  |  |  |  |
| --- | --- | --- | --- |
| Category | Health Check Report | Version No. | V1.0 |
| Date |  | Author |  |

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Sangfor Technologies Inc.

# Foreword

Dear Sirs/Madams,

Thanks for your consistent support and help. To make sure our devices serve your demands for normal business operation, we would like to ask for your cooperation on so that we can conduct a comprehensive health check to detect and eliminate underlying risks of the devices in advance, for which you can refer to details as listed in the content below.

Thanks for your cooperation!

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Chapter 1 Overview

* 1. Health Check Scope

This health check targets system services, configurations, hardware, virtual machines, logs, network, and licenses of HCI. Database and resource intensive VMs deployed by clients on HCI will be diagnosed.

* 1. Contact

|  |  |  |  |
| --- | --- | --- | --- |
| Company Name |  | | |
| Contact |  | Phone Number |  |
| Sangfor Engineer |  | Phone Number |  |
| Date |  | | |

* 1. Objectives

Objectives of this health check are as follows:

* Provide an assessment and summary of the system infrastructure and current health conditions of the platform.
* Give suggestions pertaining to performance, management and future improvement of the platform.
  1. Marks and Connotations

Marks used in this report and the corresponding connotations are as follows:

|  |  |  |
| --- | --- | --- |
| No. | Mark | Connotations |
| 1 |  | Passed: The underlying items passed the current check. |
| 2 |  | Fault: Issues occurred and need to be fixed ASAP. |
| 3 |  | Alarm: Potential threats with a relatively low significance, which may affect business operation if unsolved. |
| 4 |  | Data is unavailable. |

* 1. Items

Items covered in this health check are listed below.

|  |  |  |
| --- | --- | --- |
| Items | Sub-items | Details |
| Hardware Health | Host Online Status | Check host online status |
| Host CPU | Check CPU model, speed, usage, temperature, microcode and VT-x |
| Host Memory | Check write/read performance of host storage, storage usage, ECC memory error, storage write/read performance test, anomalies when RAM is not seated properly, usage of swap space and reduction of memory resources. |
| Interfaces | Check whether host interface is dropping packets, or in full-duplex mode, and whether the negotiation speed is consistent with the actual transfer rate of the interface. Check whether the network cables of physical interfaces are well plugged, and the transfer rate meets the requirement. |
| HDD | Check whether HDD of the host is online, and whether IOPS and rotation rate of a single disk meets the minimum requirement. Check whether the disk contains bad sector. |
| SSD | Check whether SSD of the host is online, and whether IOPS, SSD interface, temperature, lifetime and performance metrics of a single disk meets the minimum requirement. Check whether Discard (TRIM) is supported. |
| RAID card | Check status and model of RAID card. |
| Platform Running Conditions | System Partition | Check whether usage of fundamental disk partitions of the platform is normal. |
| Configuration Files | Check whether configuration files of the platform are complete. |
| Services | Check whether platform services are normal. |
| Virtual Storage Disk | Check resource usage of virtual storage disk, disk assignment and online status. |
| Virtual Storage | Check resource usage of virtual storage and backup repository usage. |
| Logs | Check whether the operation logs contain error messages and alarms. |
| Platform Configurations | Management Interface | Check whether configuration of the management interface is normal. |
| Overlay Network Interface | Check whether configuration of the overlay network interface is normal. |
| Storage Network Interface | Check whether configuration of the storage network interface is normal. |
| VM Backups | Check whether backup is enabled for virtual machine, and number of VMs backed up. |
| VM Backup Information (VMware) | Check whether backup is enabled for VMware virtual machine managed by the platform, and number of VMs backed up. |
| License Validity | Check license validity |
| Business Health Check | VM Resource Usage | Check resource-intensive virtual machines on the platform. |
| Database Running Condition | Check running condition and backups of the database deployed on the platform. |
| Platform Resource Usage | Platform Resource Usage | Check CPU, memory and disk usage of the platform. |

Chapter 2 Health Check Summary

* 1. Basic Information

|  |  |
| --- | --- |
| Cluster Version | {{version}} |
| Date | {{now\_time}}{{new\_time}} |
| Keyid | {{keyid}} |
| Host\_ip | {{host\_ip}} |

* 1. Summary of Issues

Summary of issues ranked as per level of severity. Items of the same level of severity are ranked according to sequences specified in Chapter 1.5.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Total Issues | | | Must Be Fixed | Better to be Fixed |
| {%tr if statistical%} | | | | |
| {{statistical.total\_que}} | | | {{statistical.must\_fix}} | {{statistical.suggest\_fix}} |
| {%tr else %} | | | | |
| Normal | | | | |
| {%tr endif%} | | | | |
| No. | Severity | Item | Details | Suggestions & Impacts |
| {%tr if collect\_check\_result%} | | | | |
| {%tr for item in collect\_check\_result%} | | | | |
| {{item.num}} | {{item.level.icon}} | {{item.module}} | {{item.result}} | {{item.suggestion}} |
| {%tr endfor%} | | | | |
| {%tr endif%} | | | | |

* 1. Hardware Health

Summary of hardware health check results, including CPU, memory, disk, Raid card and interfaces, and the related suggestions.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Severity | Item | Details | Suggestions & Impacts |
| {%tr if hardware\_que%} | | | | |
| {%tr for item in hardware\_que%} | | | | |
| {{item.num1}} | {{item.level.icon}} | {{item.module}} | {{item.result}} | {{item.suggestion}} |
| {%tr endfor%} | | | | |
| {%tr else %} | | | | |
| Normal | | | | |
| {%tr endif%} | | | | |

* 1. Platform Running Conditions

Summary of platform running conditions as regards configuration files, partitions and back-end services, and the related suggestions.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Severity | Item | Details | Suggestions & Impacts |
| {%tr if service\_que%} | | | | |
| {%tr for item in service\_que%} | | | | |
| {{item.num2}} | {{item.level.icon}} | {{item.module}} | {{item.result}} | {{item.suggestion}} |
| {%tr endfor%} | | | | |
| {%tr else %} | | | | |
| Normal | | | | |
| {%tr endif%} | | | | |

* 1. Platform Configurations

Summary of health check regarding HCI configurations, including interface configuration, VM backup configuration and license validity, and the related suggestions.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Severity | Item | Details | Suggestions & Impacts |
| {%tr if config\_que%} | | | | |
| {%tr for item in config\_que%} | | | | |
| {{item.num3}} | {{item.level.icon}} | {{item.module}} | {{item.result}} | {{item.suggestion}} |
| {%tr endfor%} | | | | |
| {%tr else %} | | | | |
| Normal | | | | |
| {%tr endif%} | | | | |

* 1. Platform Resource Usage

Usage of resources remaining on HCI, related issues and suggestions.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No. | Severity | Item | Details | Suggestions & Impacts | |
| {%tr if check\_cluster\_resource%} | | | | | |
| {%tr for item in check\_cluster\_resource%} | | | | | |
| {{item.num}} | {{item.level}} | {{item.check}} | {{item.result}} | | {{item.suggestion}} |
| {%tr endfor%} | | | | | |
| {%tr else %} | | | | | |
| Normal | | | | | |
| {%tr endif%} | | | | | |

Chapter 3 Results and Details

* 1. Hardware Health

Summary of hardware health check results, including CPU, memory, disk, Raid card and interface, etc.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Host IP Address | Host Online Status | CPU | Memory | Interfaces | HDD | SSD | RAID card |
| {%tr if hardware\_check%} | | | | | | | |
| {%tr for item in hardware\_check%} | | | | | | | |
| {{item.host}} | {{item.online\_level}} | {{item.cpu\_level  }} | {{item.mem\_level  }} | {{item.interface\_level  }} | {{item.disk\_level  }} | {{item.ssd\_level  }} | {{item.raid\_level}} |
| {%tr endfor%} | | | | | | | |
| {%tr endif%} | | | | | | | |

* 1. Platform Running Conditions
     1. System Partition

Summary of check results as regards items related to running conditions of HCI, including configuration files, partitions and back-end services, etc.

|  |  |  |  |
| --- | --- | --- | --- |
| Host IP Address | Partition | Details | Suggestions & Impacts |
| {%tr if sys\_partition%} | | | |
| {%tr for item in sys\_partition%} | | | |
| {%tr for k,v in item.partition.items()%} | | | |
| {%vm%}{{item.host}} | {{k}} | {{v.level}}{{v.result}} | {{v.suggestion}} |
| {%tr endfor%} | | | |
| {%tr endfor%} | | | |
| {%tr endif%} | | | |

* + 1. Virtual Storage

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Virtual Storage Name | Total Space | Free Space | Usage | Suggestions & Impacts |
| {%tr if check\_virtual\_storage%} | | | | |
| {%tr for item in check\_virtual\_storage%} | | | | |
| {{item.vs\_name}} | {{item.total}} | {{item.avail\_level}}{{item.avail}} | {{item.usage\_ratio\_level}}{{item.usage\_ratio}} | {{item.suggestion}} |
| {%tr endfor%} | | | | |
| {%tr endif%} | | | | |

* + 1. Configuration Files

|  |  |  |
| --- | --- | --- |
| Item | Result | Suggestions & Impacts |
| {%tr if platform\_config%} | | |
| {%tr for item in platform\_config%} | | |
| {{item.name}} | {{item.level}} | {{item.suggestion}} |
| {%tr endfor%} | | |
| {%tr endif%} | | |

* + 1. Services

|  |  |  |
| --- | --- | --- |
| Item | Result | Suggestions & Impacts |
| {%tr if service%} | | |
| {%tr for item in service%} | | |
| {{item.name}} | {{item.level}} | {{item.suggestion}} |
| {%tr endfor%} | | |
| {%tr endif%} | | |

* + 1. Storage

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Host | Storage Usage | Host Online Status | Data Disk/Cache Disk/Spare Disk | Suggestions & Impacts |
| {%tr if check\_storage%} | | | | |
| {%tr for item in check\_storage%} | | | | |
| {{item.host}} | {{item.usage\_ratio\_level}}{{item.usage\_ratio}} | {{item.online\_level}}{{item.online}} | {{item.configure\_ratio\_level}}{{item.configure\_ratio}} | {{item.suggestion}} |
| {%tr endfor%} | | | | |
| {%tr endif%} | | | | |

* + 1. Backup Repository

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Backup Repository Name | Total Space | Free Space | Backup Repository Usage | Suggestions & Impacts |
| {%tr if backup\_pool%} | | | | |
| {%tr for item in backup\_pool%} | | | | |
| {{item.name}} | {{item.total}} | {{item.avail\_icon}}{{item.avail}} | {{item.ratio}} | {{item.suggestion}} |
| {%tr endfor%} | | | | |
| {%tr endif%} | | | | |

* 1. Platform Configurations

Itemized summary of check result as regards HCI platform configurations, including interface, VM backups, and license validity, etc.

* + 1. Interfaces

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Interface | Item | Result | Details | Suggestions & Impacts |
| {%tr if manage\_interface%} | | | | |
| {%tr for k,v in manage\_interface.items()%} | | | | |
| {%tr for item in v%} | | | | |
| {%vm%}{{k}} | {{item.check\_item}} | {{item.level}} | {{item.result}} | {{item.suggestion}} |
| {%tr endfor%} | | | | |
| {%tr endfor%} | | | | |
| {%tr endif%} | | | | |
| {%tr if data\_interface%} | | | | |
| {%tr for k,v in data\_interface.items()%} | | | | |
| {%tr for item in v%} | | | | |
| {%vm%}{{k}} | {{item.check\_item}} | {{item.level}} | {{item.result}} | {{item.suggestion}} |
| {%tr endfor%} | | | | |
| {%tr endfor%} | | | | |
| {%tr endif%} | | | | |
| {%tr if vs\_interface%} | | | | |
| {%tr for k,v in vs\_interface.items()%} | | | | |
| {%tr for item in v%} | | | | |
| {%vm%}{{k}} | {{item.check\_item}} | {{item.level}} | {{item.result}} | {{item.suggestion}} |
| {%tr endfor%} | | | | |
| {%tr endfor%} | | | | |
| {%tr endif%} | | | | |

* + 1. VM Backups

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Result | Details | Suggestions & Impacts |
| {%tr if vm\_backup%} | | | |
| {%tr for k,v in vm\_backup.items()%} | | | |
| {%tr for item in v%} | | | |
| {%vm%}{{k}} | {{item.level}} | {{item.result}} | {{item.suggestion}} |
| {%tr endfor%} | | | |
| {%tr endfor%} | | | |
| {%tr endif%} | | | |

* + 1. CDP Backups

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | Status | Number of VMs protected | Total VMs | Suggestion |
| {%tr if cdp\_backup%} | | | | |
| {%tr for item in cdp\_backup%} | | | | |
| {{item.check\_item}} | {{item.is\_cdp\_open}} | {{item.vm\_protected}} | {{item.vm\_total}} | {{item.suggestion}} |
| {%tr endfor%} | | | | |
| {%tr endif%} | | | | |

* + 1. License Validity

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Item | License Key Status | Expiration Date | Remaining Days |
| {%tr if sn\_vaild%} | | | | |
| {%tr for item in sn\_vaild%} | | | | |
| {{item.num}} | {{item.object}} | {{item.key\_online\_level}}{{item.key\_online}} | {{item.sn\_date}} | {{item.sn\_last\_date\_level}}{{item.sn\_last\_date}} |
| {%tr endfor%} | | | | |
| {%tr endif%} | | | | |

* 1. Business Health Check
     1. VM Resources

Check CPU, memory usage and IO speed of resource-intensive VMs and analyse whether resource usage is legitimate. With all processes being normal, if the virtual machine still consumes an excessive amount of resource, it is recommended to allocate more resources to the virtual machine. If VM resource usage is high due to process anomaly, related processes will be checked and issues troubleshooted. Scaling up VM configuration is not recommended in this case as it only works temporarily but cannot solve the problem if the underlying issues are not troubleshooted.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| VM Name | CPU Usage | Memory Usage | Time | Suggestion |
| {%tr if check\_top\_vms%} | | | | |
| {%tr for vm in check\_top\_vms%} | | | | |
| {{vm.name}} | {{vm.cpu\_ratio.icon}}{{vm.cpu\_ratio.value}} | {{vm.mem\_ratio.icon}}{{vm.mem\_ratio.value}} | {{vm.time}} | {{vm.suggestion}} |
| {%tr endfor%} | | | | |
| {%tr endif%} | | | | |

* 1. Platform Resource Usage

Check usage of resources, including CPU, memory and disks on HCI.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Item | | Used | Assigned | Total | Usage | Over-commitment | Result |
| {%tr if cluster\_resource%} | | | | | | | |
| {%tr for item in cluster\_resource%} | | | | | | | |
| {{item.check\_item}} | | {{item.used}} | {{item.configured}} | {{item.total}} | {{item.usage\_ratio.value}} | {{item.over\_ratio.value}} | {{item.level}} |
| {%tr endfor%} | | | | | | | |
| Details | {{cluster\_resource\_suggestion}} | | | | | | |
| {%tr endif%} | | | | | | | |

Chapter 4 Appendix

* 1. Consulting

To reach us for typical O&M problems, call customer service (400-630-6430) or log on to the following address: <http://bbs.sangfor.com/>